SPECIFICATIONS

Item \ Model	AV-29SX2EN	
TV RF systems	CCIR B/G	
Colour systems	PAL, SECAM (NTSC 3.58 / 4.43 MHz only in EXT modes)	
Channels and frequencies	E2-E12, E21-E69, S1-S41, X, Y, Z, Z+1, Z+2, A-H, H+1, H+2	
Sound-multiplex systems	A2 / NICAM system	
Teletext systems	Fastext (United Kingdom system) / TOP (German system) / WST (standard system)	
Power requirements	AC 220 – 240 V, 50 Hz	
Power consumption	Maximum 165 W, Average 105 W, Standby 3.0 W	
Picture tube size	Visible area 68 cm (measured diagonally)	
Audio output	Rated Power output 10 W + 10 W	
Speakers	10 cm round × 2, 2 cm round × 2	
External input / output	EXT-1, EXT-2	21-pin Euroconnector (SCART)
	EXT-3	VIDEO IN (RCA) AUDIO L / R IN (RCA)
	AUDIO OUT	(Variable out (0-1 Vrms), low impedance) CENTRE output (RCA) FRONT L/R output (RCA) SURROUND REAR L/R output (RCA)
	Headphone jack (stereo mini jack, dia. 3.5 mm)	
Dimensions (W × H × D)	733 mm × 583 mm × 487 mm	
Weight	39.5 kg	
Accessories	Remote control unit RM-C793 × 1 AAA (R03) dry cell battery × 2	

Design and specifications subject to change without notice.

Pictures displayed on the screen using this TV's image-processing functions should not be shown for any commercial or demonstration purpose in public places (tearooms and halls in hotels, etc.) without the consent of the owners of copyright of the original picture sources, as this constitutes an infringement of copyright.

JVC

VICTOR COMPANY OF JAPAN, LIMITED

No.51207

JVC

COLOUR TELEVISION

AV-29SX2EN

INSTRUCTIONS

Thank you for purchasing this JVC colour television.
To ensure your complete understanding, please read this manual thoroughly before operation.

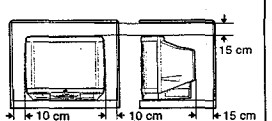
WARNING:

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION:

TO ENSURE PERSONAL SAFETY, OBSERVE THE FOLLOWING RULES REGARDING THE USE OF THIS UNIT.

1. Operate only from the power source specified (AC 220 – 240 V, 50 Hz) on the unit.
2. Avoid damaging the AC plug and power cord.
3. Avoid improper installation and never position the unit where good ventilation is unattainable.
   When installing this television, distance recommendations must be maintained between the floor and wall, as well as instalment in a tightly enclosed area or piece of furniture. Adhere to the minimum distance guidelines shown for safe operation.



4. Do not allow objects or liquid into the cabinet openings.
5. In the event of a fault, unplug the unit and call a service technician. Do not attempt to repair it yourself or remove the rear cover.

When you don't use this TV set for a long period of time, be sure to disconnect the power plug from the AC outlet.

CONTENTS

Locations of remote control buttons 2
Locations of TV buttons and parts 3
PREPARATION AND BASIC OPERATION 4
SOUND AND PICTURE 10
OTHER FEATURES 12
TELETEXT 14
SURROUND SOUND 16
OTHER PREPARATION 18
CONNECTING AMPLIFIERS AND SPEAKERS 22
TROUBLESHOOTING 24
SPECIFICATIONS 26

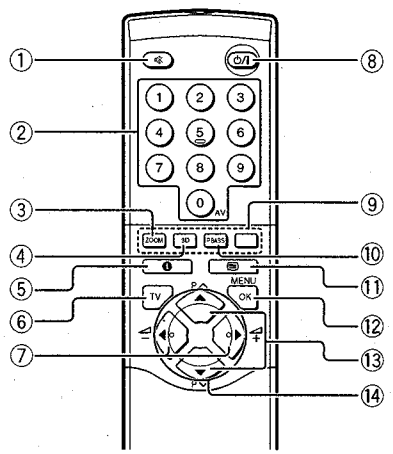
OPERATING INSTRUCTIONS

AV-29SX2EN

AV-29SX2EK | AV-29SX2EN

Locations of remote control buttons

OUTSIDE BUTTONS



①	Mute button	p.10
②	Number buttons	p.7
③	ZOOM button	p.13
④	3D button	p.16
⑤	Information button	p.13
⑥	TV button	
⑦	Volume –/+ buttons	p.7
⑧	Standby button	p.7
⑨	Colour buttons	
⑩	P. BASS button	p.10
⑪	TV/text button	p.14
⑫	OK button	
⑬	PR channel V/Λ buttons	p.7
⑭	◀/▶ / ▼/▲ buttons	
⑮	Teletext/VCR control buttons	p.14
⑯	VCR/TEXT selector switch	

- When switched to the VCR side, the ⑮ buttons function as the JVC VCR control buttons.

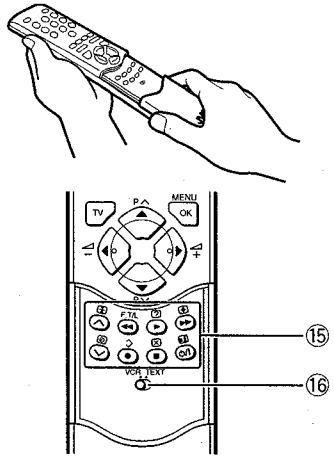
Notes:

- For details on button functions, see the JVC VCR manual.
- Depending on your VCR, the remote control may not operate perfectly, and may not even control the VCR at all.

- When switched to the TEXT side, the ⑮ buttons function as teletext control buttons.

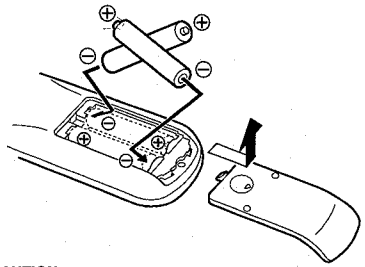
INSIDE BUTTONS

How to open the cover.



Inserting batteries into your remote control

Use two AAA/R03 dry cell batteries.
Insert two batteries, observing the ⊕ and ⊖ polarities, inserting the ⊖ end first.



CAUTION:

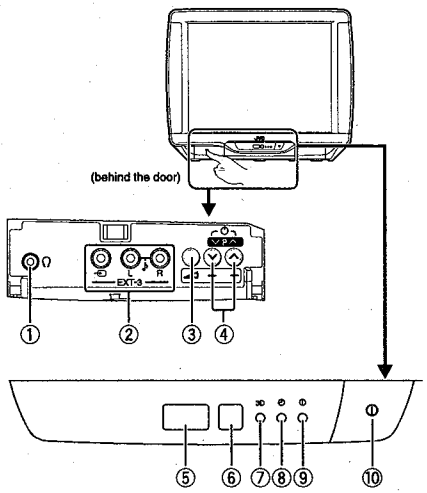
- Follow the cautions printed on the batteries.

Notes:

- Battery life is approx. six months to one year, depending on frequency of use.
- If the remote control operates erratically, replace the batteries.
- We recommend that you use the supplied batteries temporarily and replace them as soon as operation becomes erratic. The supplied batteries are for operational testing of the remote control, not for regular use.

Locations of TV buttons and parts

FRONT PANEL

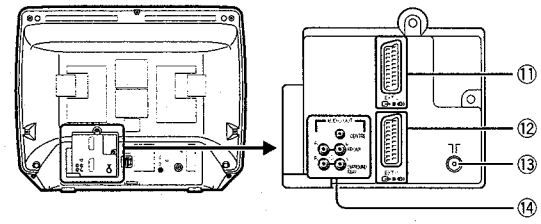


1	Headphone jack (mini jack)	p.5
2	EXT-3 terminals	p.4, 18
3	Volume button (Press this button to display the volume level indicator. Press the 4 Up/down buttons to change volume while the volume level indicator is displayed.)	p.8
4	Up/down buttons (You can use this button as the V/Λ buttons of the PR channel. Pressing the 3 Volume button makes this button function as the Volume –/+ buttons.)	p.8
5	Remote control sensor	
6	ECO sensor	
7	3D lamp	p.16
8	Sleep timer lamp	p.12
9	Power lamp	p.6, 8
10	Main power button	p.6, 8
11	EXT-2 terminal	p.4, 18
12	EXT-1 terminal	p.4, 18
13	Aerial socket	p.4
14	AUDIO OUT terminals	p.22

CAUTION:

- Do not hold the front panel door when moving the TV set. If you do, the door may be removed or broken.

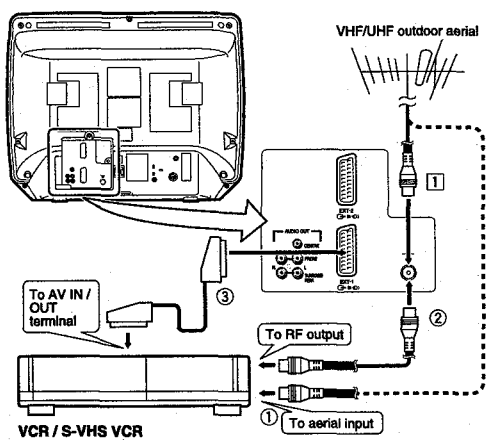
REAR PANEL



PREPARATION AND BASIC OPERATION

1. Connecting the aerial and VCR

If not connecting a VCR, do 1 only.
If connecting a VCR, proceed 1 → 2 → 3.



Notes:

- For further details, refer to manuals provided with the devices you are connecting.
- Connecting cables are not supplied.
- You can view video from a VCR without doing 3. For details, refer to the manual provided with your VCR.

2. Connecting other external devices

Conditions:

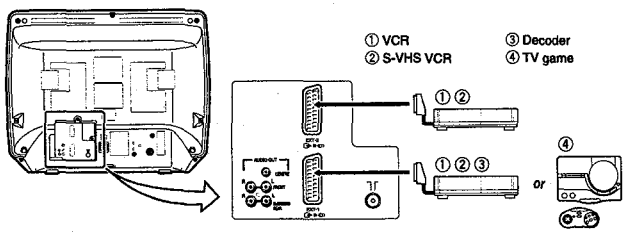
- This TV set has external device connectors, EXT-1 to EXT-3 to which you can connect a VCR. However, there are some differences in functions among them. Consult the following table before making connections.

	EXT-1	EXT-2	EXT-3 (front)
VIDEO IN	√ *1	√ *1	√
VIDEO OUT	√ *2	√ *3	–
S-VIDEO IN	√ *1	√ *1	–
S-VIDEO OUT	–	–	–
RGB IN	√	–	–
AUDIO-L IN	√	√	√
AUDIO-R IN	√	√	√
AUDIO-L OUT	√ *2	√ *3	–
AUDIO-R OUT	√ *2	√ *3	–
Others	• Automatic detection and switching of input mode.		

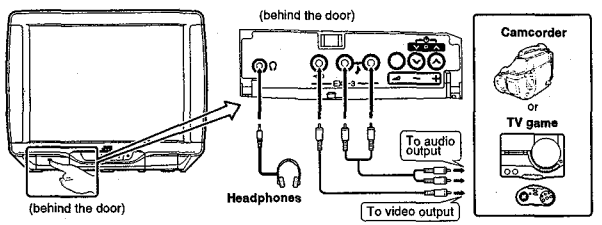
*1 Select VIDEO or S-VIDEO mode from the EXT SETTING menu. For details, see page 18 "EXT SETTING."
*2 Only the TV broadcast is output.
*3 TV broadcasts or inputs from EXT-1 or 3 can be output. For details, see page 18 "DUBBING."

- Use headphones with a stereo mini jack (dia. 3.5 mm). When using headphones, the speakers will not output sound. Although, the signal from the AUDIO OUT terminals will not cut off when headphones are connected.
- For further details, refer to manuals provided with the devices you are connecting.
- Connecting cables are not supplied.
- For details on how to connect the AUDIO OUT terminals on your TV and external devices such as the audio amplifiers or speakers, see page 22.

Devices which can be connected to the terminals on the rear panel

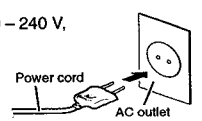


Devices which can be connected to the terminals on the front panel



3. Connecting the power cord

Insert the power plug into an AC outlet (AC 220 – 240 V, 50 Hz).



No.51207
1-3
AV-29SX2EN
AV-29SX2EN

4. Turning the power and TV on

1. Press the Main power button on the TV to turn the power on.

The Power lamp lights red (power on), then green (TV on).

If the power lamp stays red and does not change to green:
Your TV is in the standby mode. Press the Standby button on the remote control to turn your TV on.

Note:
- You can also press the PR channel ∨/∧ button, a number button or the up/down button on the front panel to turn the TV on.

5. Initial Settings

- When the TV is first turned ON, it enters into the initial setting mode, and the LANGUAGE menu is displayed.

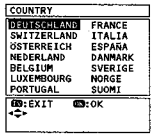
Selecting the on-screen language

You can select your language from six languages listed on the LANGUAGE menu. The displayed menus on the screen are described in the selected language.

1. Press ▼/▲ button to select ENGLISH.

2. Press OK button.

English is set for the on-screen display description, and the COUNTRY menu appears.



Note:
- The TV enters into the initial setting mode only once when the TV is first turned ON. If you turn the TV off or exit from the setting menu while performing the initial settings by mistake, you must redo the initial settings, "LANGUAGE" and "AUTO PROGRAM", following the procedures described in page 19.

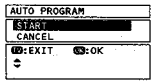
Note:
- In this manual, operation procedures are explained in English as the on-screen language is set to ENGLISH. If you select "FRANÇAIS" from the LANGUAGE selection menu, menus are all described in French of course.

Automatically allocating stations to PR channels

To view a TV programme, you must first allocate broadcast stations to PR channels. You can automatically allocate up to 99 stations to PR channels PR1 to PR 99 on this TV. Broadcast stations that can be received are automatically determined and set to PR channels.

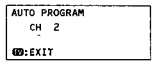
3. Press ▼/▲ and ◀/▶ button to select your country, then press OK button.

The AUTO PROGRAM menu appears.

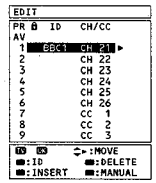


4. Press OK button.

Broadcast stations are automatically allocated to the PR channels.



The EDIT menu is displayed after the allocation is completed.
- If you want to edit PR channels or allocate a station to PR0 (AV) channel, see page 20 "EDIT/MANUAL" for procedural description.



Note:
- If you want to quit automatic allocation in the middle, press the TV button.

● The procedure is complete.
Press the TV button to exit the menu.

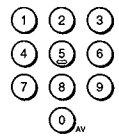
6. Viewing a television programme

1. Select a PR channel.

Selection

- Press the PR channel ∨/∧ button.

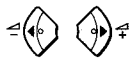
Direct channel selection



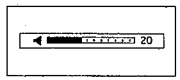
- Press the corresponding number buttons.
  Example: To select channel 6, press "6".
  To select channel 12, press "1" and "2".

Notes:
- If the picture is not clear or no colour appears, change the colour system manually (see page 10 for details).
- Enter "0" when selecting an AV channel (PR 0 channel).

2. Press the Volume –/+ button.



The Volume level indicator appears and the volume changes as you press the Volume –/+ buttons.



Turning the TV and power off

1. Press the Standby button to turn the TV off.

The Power lamp changes from green to red.
The TV enters standby mode.

2. Press the Main power button on the TV to turn the main power off.

The Power lamp goes off.

Note:
- To save energy, we recommend that you turn the main power off if you do not plan to use your TV for a long time.

To select a channel without using the remote control

You can also use the buttons on the front panel of the TV.

1. Press the Up/down button to turn your TV on.

The Power lamp changes from red to green.

Note:

- If your TV does not turn on, press the Main power button, and then press the Up/down button again.

2. Press the Up/down button to select the PR channel.

Note:

- PR channel selection is not available while the volume level indicator is displayed.

3. Adjust the volume.

1. Press the Volume button.
   The volume level indicator appears.
2. Press the Up/down button while the volume level indicator is displayed.

● To turn off your TV, press the Main power button.

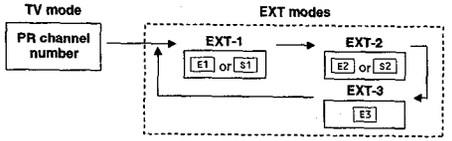
The Power lamp goes off.

Viewing images from external devices

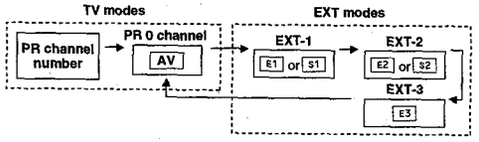
1. Repeatedly press the 0 button to select the EXT terminal.

The current selection appears, and disappears after several seconds.

When a station is not registered to the PR 0 (AV) channel, pressing the 0 button changes the selection as follows:



When a station is registered to the PR 0 (AV) channel, pressing the 0 button changes the selection as follows:



TV mode:

Shows images input from an external device (such as a VCR) or TV aerial connected to the aerial socket of your TV.

EXT modes:

Shows images input from an external device (such as a VCR) connected to the selected EXT terminal.

- To use S-Video mode to view input from an S-VHS VCR, see "To select S-VIDEO input for a terminal" on page 18. When selecting EXT-1 or EXT-2 input terminals as S-VIDEO input, E1 or E2 changes to S1 or S2 in the display.

Notes:

- If the picture is not clear or no colour appears, change the colour system manually (see page 10).
- When selecting an EXT terminal with no input signal, the EXT number and ID become fixed on screen.

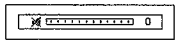
SOUND AND PICTURE

MUTE

You can mute the volume to 0 instantly. This is convenient when answering the phone or when receiving visitors.

1. Press (Mute).

The sound is muted.



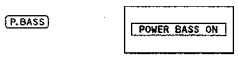
To restore the sound:
Press the Mute button again.

POWER BASS

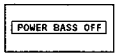
You can enjoy richness and fullness of the bass sound.

1. Press P. BASS.

The POWER BASS turns on.



To cancel the function:
Press the P. BASS button again.



MULTI SOUND

You can select the multi sound mode for stereo broadcast programmes and bilingual programmes.

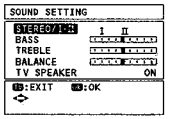
Note:
- The MULTI SOUND function has no effect on programmes other than A2 or NICAM broadcast programmes.

1. Press OK.

The MENU appears.

2. Press ▼/▲ to select SOUND SETTING, then press OK.

The SOUND SETTING menu appears.



3. Press ▼/▲ to select STEREO/I•II.

Notes:
- The multi sound mode display is different from the broadcast programme.
- The multi sound function does not work in EXT modes. The STEREO/I•II does not appear in SOUND SETTING menu.

4. Press ◀/▶ to select a multi sound mode.

: Stereo sound
I : Bilingual I (Sub I)
II : Bilingual II (Sub II)
○ : Normal sound

5. Press OK.

This completes the setting.

Note:
- When you display the current PR channel number, the current multi sound mode appears for approximately 3 seconds.

TINT

You can choose from among three TINT modes.

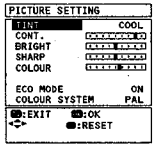
1. Press OK.

The MENU appears.

2. Press ▼/▲ to select PICTURE SETTING, then press OK.

The PICTURE SETTING menu appears.

3. Press ▼/▲ to select TINT.



4. Press ◀/▶ to select a tint mode.

COOL:
A cool white colour base with a boost in the colour and contrast levels. Creating a more vivid picture.

WARM:
Use this mode when viewing film programmes.

NORMAL:
A normal white colour base with no boost in the colour or contrast levels.

5. Press OK.

This completes the setting.

COLOUR SYSTEM

The colour system is automatically selected, but if the picture is not clear or no colour appears, select the colour system manually.

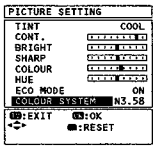
1. Press OK.

The MENU appears.

2. Press ▼/▲ to select PICTURE SETTING, then press OK.

The PICTURE SETTING menu appears.

3. Press ▼/▲ to select COLOUR SYSTEM.



4. Press ◀/▶ to select the appropriate colour system.

PAL:
PAL system.

SECAM:
SECAM system.

N3.58:
NTSC 3.58 MHz system.

N4.43:
NTSC 4.43 MHz system.

AUTO:
Automatic colour system selection.

Notes:
- Auto may not function properly depending on signal quality. If the picture is abnormal in AUTO mode, select another colour system manually.
- When in TV mode (PR 1 to PR 99), you cannot select AUTO, NTSC 3.58 or NTSC 4.43.
- When in TV mode (PR 0), you cannot select NTSC 3.58 or NTSC 4.43.

5. Press OK.

This completes the setting.

PICTURE/SOUND ADJUSTMENT

You can adjust the picture and sound as you like.

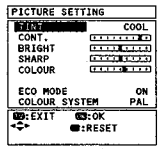
To adjust the picture

1. Press OK.

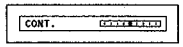
The MENU appears.

2. Press ▼/▲ to select PICTURE SETTING, then press OK.

The PICTURE SETTING menu appears.



3. Press ▼/▲ to select an item, and press ◀/▶ to adjust it.



- To return to the default settings, press the blue button.

◀	Item	▶
Lower	CONT. (picture contrast)	Higher
Darker	BRIGHT (picture brightness)	Brighter
Softer	SHARP (picture sharpness)	Sharper
Lighter	COLOUR (picture colour)	Deeper
Reddish	HUE (picture hue)	Greenish

Note:
- You can adjust the HUE (picture hue) only when the colour system is NTSC 3.58 or NTSC 4.43.

4. Press OK.

This completes the setting.

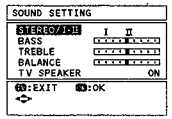
To adjust the sound

1. Press OK.

The MENU appears.

2. Press ▼/▲ to select SOUND SETTING, then press OK.

The SOUND SETTING menu appears.



Note:
- When DOLBY* PRO LOGIC is selected in DIGITAL SURROUND menu, BALANCE and TV SPEAKER do not appear.

* Manufactured under license from Dolby laboratories Licensing Corporation.
"Dolby", the double-D symbole and "Pro Logic" are trademarks of Dolby Laboratories Licensing Corporation.

3. Press ▼/▲ to select an item, and press ◀/▶ to adjust it.

◀	Item	▶
Weaker	BASS (low frequency sound)	Stronger
Weaker	TREBLE (high frequency sound)	Stronger
Left	BALANCE (audio balance)	Right

TV SPEAKER ON/OFF:
Use this function if you connect an audio amplifier and front speakers to your TV. If you set this function to OFF, sound is no longer output from the TV's speakers and the headphones connected to your TV. For details, see "To use 2 external speakers" on page 22.

4. Press OK.

This completes the setting.

ECO MODE

When you set ECO MODE to ON, the screen contrast is automatically adjusted to a setting suitable for the brightness of your room.
This reduces eye strain and the power consumption of the TV.

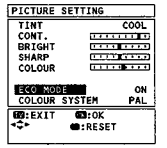
1. Press OK.

The MENU appears.

2. Press ▼/▲ to select PICTURE SETTING, then press OK.

The PICTURE SETTING menu appears.

3. Press ▼/▲ to select ECO MODE.



4. Press ◀/▶ to select ON, OFF.

5. Press OK.

This completes the setting.

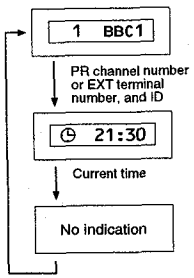
OTHER FEATURES

INFORMATION

You can display the channel number, EXT terminal number and ID, or the current time.

1. Press [0] (Information) repeatedly.

The display changes cyclically in the following order.



About the current time display:
This TV uses teletext data to determine the current time.

- If the TV has not received a station that has teletext data since it was turned on, the time display is blank. To view the current time, select a station that is broadcasting teletext data. As long as you do not turn off the TV, then even if you select other stations, the time will still be displayed.
- When watching videos, the wrong current time is sometimes displayed.

Note:
- When selecting an EXT terminal with no input signal, the EXT number and ID become fixed on the screen. In this case the display button will not work.

SLEEP TIMER

You can set the TV to automatically turn off after a specified period of time.

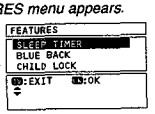
Note:
- The SLEEP TIMER does not turn off the Main power.

1. Press OK.

The MENU appears.

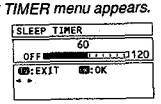
2. Press ▼/▲ to select FEATURES, then press OK.

The FEATURES menu appears.



3. Press ▼/▲ to select SLEEP TIMER, then press OK.

The SLEEP TIMER menu appears.



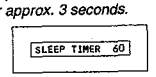
4. Press ◀/▶ to select a period of time.

You can set the period of time a maximum of 120 minutes in 10 minute increments.

OFF:
Turns off the SLEEP TIMER.

5. Press OK.

The selected period of time is displayed for approx. 3 seconds.



- The Sleep timer lamp lights if you set the SLEEP TIMER.

To display the remaining Sleep timer time:
Perform steps 1 to 3 to display the SLEEP TIMER menu, and press the OK button when you finish checking the time.

To turn off the Sleep timer:
Perform steps 1 to 3 to display the SLEEP TIMER menu, press the ◀ button to select "OFF", and then press the OK button.

- The Sleep timer lamp goes out.

Note:
- One minute before the SLEEP TIMER turns off the TV, "GOOD NIGHT!" appears. Three seconds before the SLEEP TIMER turns off the TV, "JVC" is displayed on the screen.

BLUE BACK

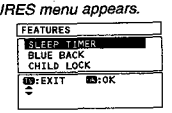
When viewing a PR channel with no or poor reception, or if there is no input from an external device, you can mute the sound and change the picture into a blue picture.

1. Press OK.

The MENU appears.

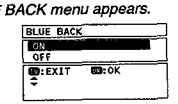
2. Press ▼/▲ to select FEATURES, then press OK.

The FEATURES menu appears.



3. Press ▼/▲ to select BLUE BACK, then press OK.

The BLUE BACK menu appears.



4. Press ▼/▲ to select ON or OFF.

5. Press OK.

This completes the setting.

CHILD LOCK

You can lock some PR channels to prevent your children from watching them.

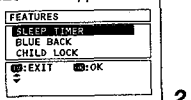
To set the CHILD LOCK

1. Press OK.

The MENU appears.

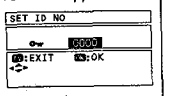
2. Press ▼/▲ to select FEATURES, then press OK.

The FEATURES menu appears.



3. Press ▼/▲ to select CHILD LOCK, then press 0 button.

The SET ID NO menu appears.

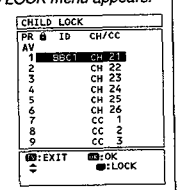


4. Enter the ID number.

1. Press ▼/▲ to select a number.
2. Press ◀/▶ to move the cursor.

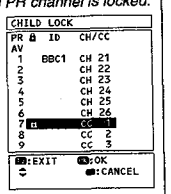
5. Press OK.

The CHILD LOCK menu appears.



6. Press ▼/▲ to select a PR channel, then press blue button.

The selected PR channel is locked.



- To cancel the CHILD LOCK: Press the blue button again.
- Repeat step 6 to lock all PR channels which you want to lock.

7. Press OK.

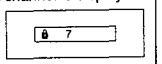
This completes the setting.

Notes:
- You cannot select a locked PR channel using the PR channel V/Λ buttons.
- Even if you can select a locked channel and display it, you can not view the programme of the locked channel.

To view a locked PR channel

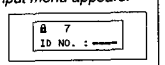
1. Select a locked PR channel.

- Use the number buttons to select the PR channel.
  The locked channel is displayed.



2. Press [0] (Information).

The ID NO. input menu appears.



3. Press the number buttons to enter the ID number.

You are now viewing the locked PR channel.

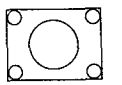
If you forget the ID number:
Perform steps 1 to 3 of "To set the CHILD LOCK". After you confirm the ID number, press the TV button to exit the menu.

ZOOM

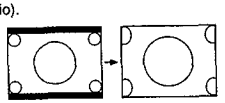
You can use the ZOOM function to enlarge the vertical dimensions of the picture in the 16:9 aspect ratio or 14:9 aspect ratio so that the picture fits on the entire screen in as natural a manner as possible.
Also, pictures that have been compressed (squeezed) to the 16:9 aspect ratio can be returned to their original dimensions.

1. Press ZOOM repeatedly to select a ZOOM mode.

REGULAR mode:
The picture returns to normal.

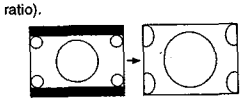


ZOOM1 mode:
Use to enlarge pictures (14:9 aspect ratio).



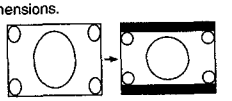
14:9 aspect ratio ZOOM1 mode

ZOOM2 mode:
Use to enlarge pictures (16:9 aspect ratio).



16:9 aspect ratio ZOOM2 mode

16:9 mode:
Use for pictures with a 16:9 aspect ratio that have been squeezed into a normal picture (4:3 aspect ratio). You can restore their original dimensions.



Squeezed to the 16:9 aspect ratio 16:9 mode

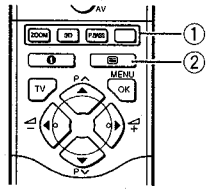
Note:
- When you use the ZOOM1 and ZOOM2 modes, the top, bottom, left and right of the picture will be cut off slightly.

No.51207
1-7
AV-29SX2EN

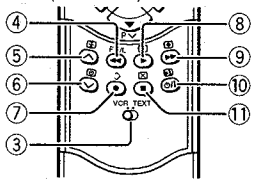
TELETEXT

Note:
- If you have trouble receiving teletext broadcasts, consult your local dealer or the teletext station.

(Outside buttons)



(Inside buttons)



① Colour buttons
② TV/text button
③ VCR/TEXT selector switch
- When this switch is set to the TEXT side, the following buttons function as the teletext control button.

④ MODE button
⑤ HOLD button
⑥ SUB PAGE button
⑦ STORE button
⑧ REVEAL button
⑨ SIZE button
⑩ INDEX button
⑪ DISPLAY CANCEL button

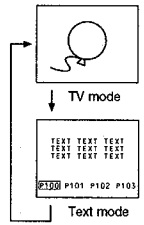
BASIC TELETEXT OPERATION

You can view three types of teletext broadcasts on the TV: Fastext, TOP and WST. The TV automatically recognizes the type of teletext broadcast.

Condition:
- The VCR/TEXT selector switch must already be set to the TEXT side.

1. Select a channel with a teletext broadcast.

2. Press (TV/text).



Note:
- In text mode, the ZOOM mode is fixed to the REGULAR mode.

3. Select a page number.

Browse:
Press the PR channel V/Λ button on the remote control.

Direct selection:
Press the number buttons to enter a three-digit page number.

Colour button selection:
Press a colour button to select the corresponding page number on the bottom line of the screen.

Notes:
- Category names of teletext pages may appear instead of page numbers.

● To return to TV mode, press the TV/text again.

Note:
- You can also return to TV mode by pressing the TV button.

DISPLAY CANCEL

You can search for a teletext page while watching TV.

1. Select a teletext page.

The TV searches for a teletext page.

2. Press DISPLAY CANCEL.

The TV programme appears.

When the TV finds the teletext page, its page number appears in the upper left of the screen.

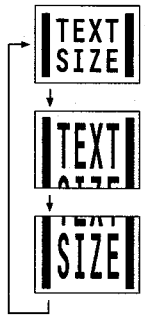
Note:
- When you use DISPLAY CANCEL function, the ZOOM mode is fixed to the REGULAR mode.

3. Press (TV/text) when the page number is on the screen.

SIZE

You can double the height of the teletext display.

1. Press SIZE repeatedly.

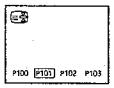


HOLD

You can hold a teletext page on the screen for a desired length of time, even while several other teletext pages are being received.

1. Press HOLD.

is displayed in the upper left of the screen, and the teletext page is held on the screen.



To release hold mode:
Press the HOLD button again.

INDEX

Just press the INDEX button to return to the index page.

1. Press INDEX.

Fastext/TOP/WST:
Returns to page 100 or a previously specified page.

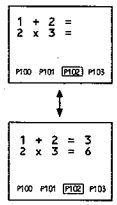
LIST mode:
Returns to the page number displayed in the lower left area of the screen.

REVEAL

Some teletext pages include hidden text (such as answers to a quiz).

1. Press REVEAL.

Each time you press the REVEAL button, text is hidden or revealed.



LIST MODE

If you store the numbers of teletext pages you view often, you can quickly call up a desired teletext page whenever you like.

Note:
- You can store up to 64 pages in memory. You can store four pages in each channel from 1 to 15 (60 pages). and four pages that are the same for all channels above channel 15 (4 pages).

To store the page numbers

1. Press MODE to engage LIST mode.

Stored page numbers are displayed at the bottom of the screen.

2. Press a colour button, then enter the number of the teletext page.

To assign other pages to remaining colour buttons, repeat this operation.

3. Press and hold STORE.

The four page numbers blink white to indicate that they are stored in memory.

To call up a stored page

1. Press MODE to engage LIST mode.

Stored page numbers are displayed at the bottom of the screen.

To release LIST mode:
Press the MODE button again.

2. Press a colour button to which a page has been assigned.

SUB PAGE

Some teletext pages include sub-pages that are automatically displayed. You can hold any sub-page, or view it at any time.

1. Call up a teletext page with sub-pages.

2. Press SUB PAGE.

3. Enter the number of the sub-page.

Example:
To select the 3rd sub-page, press number buttons "0", "0", "0", and "3".

Note:
- You can also select a sub page by pressing the red or green colour button.

SURROUND SOUND

DOLBY PRO LOGIC 3D-PHONIC

You can enjoy the ambiance of Dolby Surround encoded programmes.

Condition:
- Before performing the procedure, disconnect headphones from the TV.

Note:
- This function works only with Dolby Surround encoded programmes.
- When operating this function, the TV's 3D lamp lights up.

1. Press OK.

The MENU appears.

2. Press ▼/▲ to select DIGITAL SURROUND, then press OK.

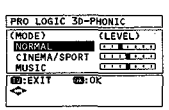
The DIGITAL SURROUND menu appears, showing the currently active function.

3. Press ▼/▲ to select PRO LOGIC 3D-PHONIC.

To cancel the function:
Select SURROUND OFF, then press the OK button.

4. Press ▶.

The PRO LOGIC 3D-PHONIC menu appears.



5. Press ▼/▲ to select the desired mode.

NORMAL:
For normal programmes

CINEMA/SPORT:
For cinema and sports programmes

MUSIC:
For music programmes

To adjust the effect level:
Press the ◀/▶ button.

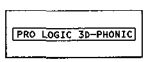
6. Press OK.

Note:
- If, while using this function, you connect headphones to your TV, the 3D HEADPHONE function (see next page) activates automatically.

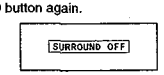
To turn on/off DOLBY PRO LOGIC 3D-PHONIC with one touch

1. Press 3D.

DOLBY PRO LOGIC 3D-PHONIC turns on.



To cancel the function:
Press the 3D button again.



To return the previous surround function:
Press the 3D button twice.

Note:
- If headphones are connected to the TV, 3D HEADPHONE will appear instead of PRO LOGIC 3D-PHONIC. In this case, unplug the headphones from the TV.

DIGITAL SURROUND

You can enjoy any one of the four Digital Surround function.

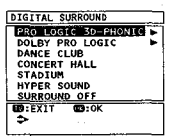
Condition:
- Before performing the procedure, disconnect headphones from the TV.

1. Press OK.

The MENU appears.

2. Press ▼/▲ to select DIGITAL SURROUND, then press OK.

The DIGITAL SURROUND menu appears, showing the currently active function.



3. Press ▼/▲ to select the desired function.

DANCE CLUB:
For the atmosphere of a dance club

CONCERT HALL:
For the atmosphere of a concert hall

STADIUM:
For the atmosphere of a stadium

HYPER SOUND:
To give monaural sound the spacious feeling of stereo sound

To cancel the function:
Select SURROUND OFF.

4. Press OK.

Notes:
- Only HYPER SOUND works well with monaural sound programmes.
- HYPER SOUND does not work well with stereo sound programmes.
- If, while using this function, you connect headphones to your TV, Headphone Surround (see next page) activates automatically.

HEADPHONE SURROUND

You can enjoy surround sound on your headphones. You can enjoy any one of the four Headphone surround functions.

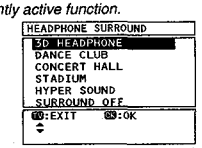
Condition:
- Before performing this procedure, connect headphones to the TV.

1. Press OK.

The MENU appears.

2. Press ▼/▲ to select HEADPHONE SURROUND, then press OK.

The HEADPHONE SURROUND menu appears, showing the currently active function.



3. Press ▼/▲ to select the desired function.

3D HEADPHONE:
For a broad, atmospheric sound

DANCE CLUB:
For the atmosphere of a dance club

CONCERT HALL:
For the atmosphere of a concert hall

STADIUM:
For the atmosphere of a stadium

HYPER SOUND:
To give monaural sound the spacious feeling of stereo sound

To cancel the function:
Select SURROUND OFF.

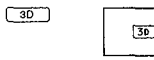
4. Press OK.

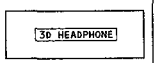
Note:
- HYPER SOUND does not work well with stereo sound programmes.

To turn the 3D HEADPHONE on/off with one touch

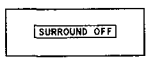
1. Press 3D.

3D HEADPHONE turns on.





To cancel the function:
Press the 3D button again.



To return the previous surround function:
Press the 3D button twice.

Note:
- If headphones are not connected to the TV, PRO LOGIC 3D-PHONIC will appear instead of 3D HEADPHONE. In this case, plug headphones into the TV.

DOLBY PRO LOGIC SURROUND

You can also use Dolby Pro Logic Surround sound with 4 or 5 speakers. If you wish to use this system, additional amplifiers and speakers are required. For details, see "To use 4 or 5 speakers" on page 23.

Condition:
- Before performing the procedure, disconnect headphones from the TV.

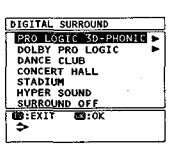
Note:
- This function works only with Dolby Surround encoded programmes.

1. Press OK.

The MENU appears.

2. Press ▼/▲ to select DIGITAL SURROUND, then press OK.

The DIGITAL SURROUND menu appears, showing the currently active function.



3. Press ▼/▲ to select DOLBY PRO LOGIC.

To cancel the function:
Select SURROUND OFF.

4. Press OK.

Note:
- If, while using this function, you connect headphones to the TV, the 3D HEADPHONE function (see above) activates automatically. However, note that you cannot use Dolby Pro Logic Surround with headphones.

OTHER PREPARATION

EXT SETTING

You can select S-VIDEO or normal input for the EXT-1 and EXT-2 terminals, and you can give an EXT ID to each EXT input terminal.

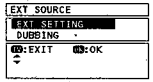
To select S-VIDEO input for a terminal

1. Press OK.

The MENU appears.

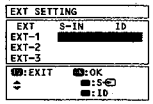
2. Press ▼/▲ to select EXT SOURCE, then press OK.

The EXT SOURCE menu appears.



3. Press ▼/▲ to select EXT SETTING, then press OK.

The EXT SETTING menu appears.

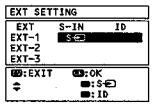


4. Press ▼/▲ to select an EXT input terminal.

5. Press yellow button.

The S-VIDEO input indication appears.

- To select normal input, press the yellow button again.



- If you want to set an EXT ID here, perform the operation procedures from the step 4 of the section "To give an EXT ID to an EXT input terminal" in the next column.

6. Press OK.

The menu disappears.

To give an EXT ID to an EXT input terminal

1. Press OK.

The MENU appears.

2. Press ▼/▲ to select EXT SOURCE, then press OK.

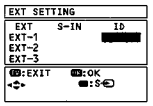
The EXT SOURCE menu appears.

3. Press ▼/▲ to select EXT SETTING, then press OK.

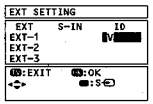
The EXT SETTING menu appears.

4. Press ▼/▲ to select an EXT input terminal.

5. Press blue button.

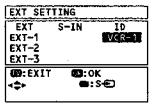


6. Repeatedly press ▼/▲ to select a character.



7. Press ▶ to move the cursor forward.

- Pressing the ◀ button moves the cursor backward.
- To cancel the operation, press the Information button.



8. Press OK.

Note:

- To erase EXT ID, reset the EXT ID to a blank space.

● This completes the procedure. Press the TV button to exit the menu.

DUBBING

Select output to a VCR or other device connected to the EXT-2 terminal. Note that you cannot output from the EXT-2 terminal when the TV is turned off.

Note:

- RGB signals from TV games and TELETEXT screens cannot be output from EXT-2 terminal.

1. Press OK.

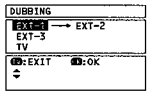
The MENU appears.

2. Press ▼/▲ to select EXT SOURCE, then press OK.

The EXT SOURCE menu appears.

3. Press ▼/▲ to select DUBBING, then press OK.

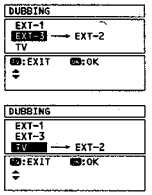
The DUBBING menu appears.



4. Press ▼/▲ to select the input which you want to output from EXT-2.

TV:

The sound and picture of the currently selected PR channel is output from EXT-2, so you can record the output on a VCR connected to the EXT-2 terminal while watching a video input from the EXT-1 or EXT-3 terminal.



5. Press OK.

The menu disappears.

LANGUAGE

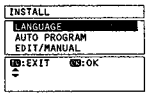
You can select one of six languages for the on-screen display.

1. Press OK.

The MENU appears.

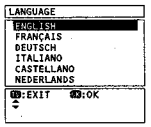
2. Press ▼/▲ to select INSTALL, then press OK.

The INSTALL menu appears.



3. Press ▼/▲ to select LANGUAGE, then press OK.

The LANGUAGE menu appears.



4. Press ▼/▲ to select a language.

5. Press OK.

This completes the setting.

AUTO PROGRAM

You can automatically allocate up to 99 stations to PR channels PR 1 to PR99 on this TV.
When the TV receives a signal describing the station's name, it allocates those stations, station IDs, and registers then as they were preset at the JVC factory.

1. Press OK.

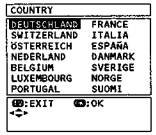
The MENU appears.

2. Press ▼/▲ to select INSTALL, then press OK.

The INSTALL menu appears.

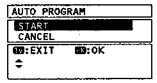
3. Press ▼/▲ to select AUTO PROGRAM, then press OK.

The COUNTRY menu appears.



4. Press ▼/▲/◀/▶ to select your country, then press OK.

The AUTO PROGRAM menu appears.



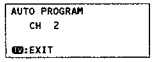
Note:

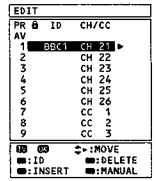
- If you make a mistake when selecting your country, or do not want to use the Automatic allocation function, select CANCEL, and then press the OK button to return to the INSTALL menu.

5. Press OK.

The PR channel is automatically set and the EDIT menu is displayed.

- If you want to edit PR channels or allocate a station to PR0 (AV) channel, see page 20 "EDIT/MANUAL" for procedural description.





Note:

- If a station you want to view is not allocated to a PR channel, perform Manual allocation (see page 21).

● The procedure is complete. Press the TV button to exit the menu.

EDIT/MANUAL

You can change PR channel settings by doing any of the following:
- You can delete an unwanted station from a PR channel,
- You can change the PR channel number of a station,
- You can add station IDs to PR channels,
- You can add a new station to a PR channel, or
- You can manually allocate the desired station to a PR channel.

To edit PR channels

1. Press OK.

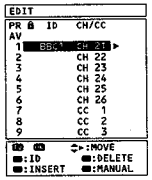
The MENU appears.

2. Press ▼/▲ to select INSTALL, then press OK.

The INSTALL menu appears.

3. Press ▼/▲ to select EDIT/MANUAL, then press OK.

The EDIT menu appears.

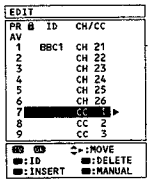


4. Use any of the procedures described in the following pages to change the PR channel settings.

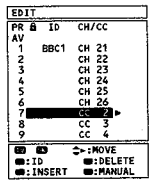
● This completes the procedure. Press the TV button to exit the menu.

To delete a station from a PR channel

1. Press ▼/▲ to select the station you want to delete.



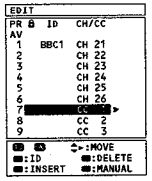
2. Press yellow button.



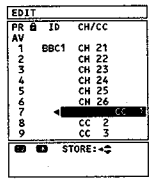
Note:
- Stations allocated to PR channels following the deleted PR channel number are shifted back by one to the preceding PR channel number.

To change the PR channel number of a station

1. Press ▼/▲ to select the station.

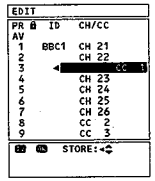


2. Press ▶.

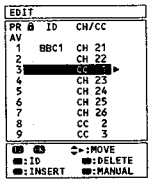


3. Press ▼/▲ to move the selected station to the desired PR channel number.

- To cancel the operation, press the (Information) button.

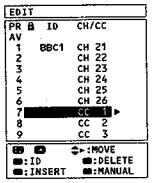


4. Press ◀.

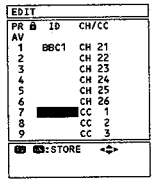


To add a station ID to a station

1. Press ▼/▲ to select the station.

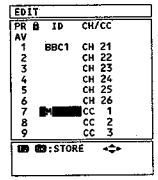


2. Press red button.



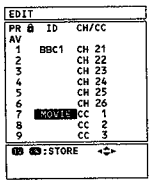
3. Press ▼/▲ repeatedly to select a character.

- To cancel the operation, press the (Information) button.



4. Press ▶ to move the cursor forward.

- Pressing the ◀ button moves the cursor backward.
- To complete station ID, follow steps 3 and 4 repeatedly.

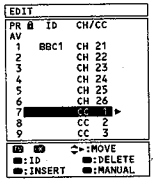


5. Press OK.

Returns to the EDIT menu.

To add a new station to a PR channel

1. Press ▼/▲ to select the row containing the PR channel number to which you want to add a station.

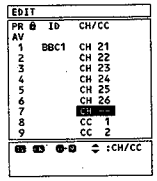


2. Press green button.

3. Press ▼/▲ to display the enter number indicator.

CH: To add terrestrial broadcast stations
CC: To add cable TV stations

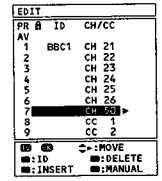
- To cancel the operation, press the Information button.



Note:
- For details on the relationship between the displayed CH/CC number and the actual channel number, see the Channel table on page 25.

4. Press the number buttons to enter the channel number.

- To enter a one-digit channel number, enter the corresponding number and press the OK button.

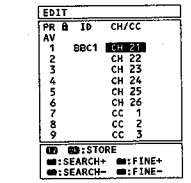


Note:
- When you add a station, the station preset to PR99 is deleted.

To manually allocate a station to PR channel (Manual allocation)

1. Press blue button.

Your TV enters the Manual allocation mode.



2. Press ▼/▲ to select a PR channel number.

Note:
- PR channel number "AV" appears on the screen as PR 0 channel. We recommend that you allocate this PR channel to a VCR connected to the aerial socket.

3. Press green or red button to search for a station.

Scanning stops when the TV receives a broadcast.
Press the green or red button to search for another station, and keep searching until you see the station you want.
CH: Terrestrial broadcast stations
CC: Cable TV stations

If reception is poor:
Press the blue or yellow button to fine-tune the station.

Note:
- For details on the relationship between the displayed CH/CC number and the actual channel number, see the Channel table on page 25.

4. Press OK.

The station is allocated to a PR channel.

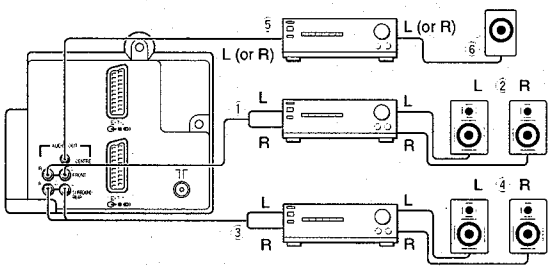
CONNECTING AMPLIFIERS AND SPEAKERS

Condition:
- When connecting audio amplifiers and speakers to your TV:
  - Turn the TV and audio amplifiers off before connecting them.
  - Set the audio amplifiers' volume to minimum.
  - Refer to manuals provided with the amplifier and speakers for further details.

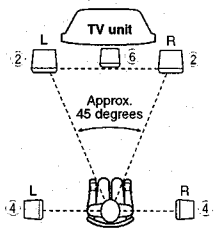
Notes:
- The AUDIO OUT terminals on your TV are for connecting to an audio system. The output level is controlled by the Volume controls of your TV. The signal from the AUDIO OUT terminals will not cut off when headphones are connected.
- If you connect a Dolby Pro Logic Surround decoder to your TV, use the FRONT L and R jacks. Your TV has Dolby Pro Logic Surround functions, so if you connect an external decoder, turn off all surround function on your TV.

1, 3: Stereo amplifier
2: Front speakers (magnetic-shielded type, L, R)
4: Surround speakers (L, R)
5: Stereo amplifier (or monaural amplifier)
6: Centre speaker (magnetic-shielded type)

(Terminals on rear)



Positioning speakers



Notes:
- For a good effect, place speakers 4 1.0 m above the seated listener's head.
- For a good effect, place speaker 6 as close as possible to the TV along the same line as or behind, speakers 2.
- Use magnetic-shielded speakers for speakers 2 and 6 to avoid TV interference.

To use 2 external speakers

You can cut off the sound output from the TV's speakers and enjoy sound from external front speakers.

1. Connect stereo amplifier 1 and front speakers 2 to your TV.

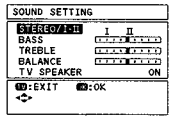
2. Turn your TV on, and press the Volume –/+ button to set the volume to the lowest setting.

3. Press OK.

The MENU appears.

4. Press ▼/▲ to select SOUND SETTING, then press OK.

The SOUND SETTING menu appears.



Note:
- When DOLBY PRO LOGIC is selected in DIGITAL SURROUND menu, "TV SPEAKER" does not appear. In this case, press the OK button to exit the current menu. Then, press the 3D button twice to select SURROUND OFF and repeat from Step 3.

5. Press ▼/▲ to select TV SPEAKER.

6. Press ◀/▶ to select OFF.

The TV's speakers become silent and the menu disappears after several seconds.

To output sound from the TV speakers:
Set TV SPEAKER to ON.

Note:
- If TV SPEAKER is set to OFF, sound will no longer be output from the headphones connected to your TV.

7. Press OK.

The menu disappears.

8. Turn your audio amplifier on, and return the volume of your audio amplifier to the normal setting.

Note:
- Take care not to set the volume of your audio amplifier too high as this may damage your speakers.

9. Press the Volume –/+ button to adjust the volume.

● This completes the procedure.

To use 4 or 5 speakers

You can enjoy Dolby Pro Logic Surround sound with 4 or 5 speakers.

1. Connect audio amplifiers and speakers to the TV.

Do one of the following:

A: Connect stereo amplifier 3 and surround speakers 4. This leaves out the centre speaker.

B: Connect stereo amplifiers 1, 3, front speakers 2, and surround speakers 4. This uses the TV's speakers as the centre speakers.

C: Connect stereo amplifiers 1, 3, stereo amplifier (or monaural amplifier) 5, front speakers 2, surround speakers 4, and centre speaker 6. If you use this method, do not output sound from the TV's speakers.

2. Turn your TV on, and press the Volume –/+ button to set the volume to the normal setting.

3. Press OK.

The MENU appears.

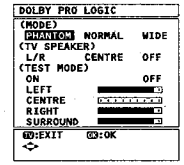
4. Press ▼/▲ to select DIGITAL SURROUND, then press OK.

The DIGITAL SURROUND menu appears, showing the currently selected setting.

Note:
- If headphones are connected to the TV, DIGITAL SURROUND does not appear in the MENU. Disconnect the headphones.

5. Press ▼/▲ to select DOLBY PRO LOGIC, then press ▶.

The DOLBY PRO LOGIC menu appears.



6. Press ▼/▲ to select an item, and press ◀/▶ to change its setting.

	Item	
Method	MODE	TV SPEAKER
A	PHANTOM	L/R
B	NORMAL	CENTRE
C	NORMAL	OFF
	WIDE	

Note:
- Set MODE to WIDE when using a full-range speaker as the centre speaker. Frequencies of 100 Hz or lower are output from the centre speaker to give Dolby Surround an even greater impact.

7. Turn your audio amplifier on, and return the volume of your audio amplifier to the normal setting.

Note:
- Take care not to set the volume of your audio amplifier too high as this may damage your speakers.

8. Press ▼/▲ to select TEST MODE.

9. Press ◀/▶ to set TEST MODE to ON.

Test signals alternate among the speakers.

Note:
- If the test signal level is small to listen to, adjust it with the volume of your audio amplifier. However, take care not to set the volume too high as this may damage your speakers.

10. Press ◀/▶ to adjust the level of each of the speakers so that their volumes are the same at the listening position (the place where the person is sitting in the diagram, see page 22).

LEFT, RIGHT:
Front speaker L, R

CENTRE:
Centre speaker

SURROUND:
Surround speakers

Notes:
- When MODE is set to PHANTOM, the volume of CENTRE: (Centre speaker) cannot be adjusted.
- If the volume of both speakers is not the same even after adjusting the volume, adjust the volume of your audio amplifier.

11. Press OK.

The menu disappears.

● This completes the procedure.

TROUBLESHOOTING

- If the plug is disconnected from the AC socket, or the TV aerial has problems, you may think there is a problem with the TV itself. Be sure to check the following before calling for service.

IMPORTANT

- Review all instructions in this manual.

	Problem	Action
■ GENERAL	No power supply.	Insert the plug in an AC socket. Press the Main power button (see page 6).
	No picture or sound.	Check aerial connections (see page 4). Press the number 0 button to select the correct mode (see page 9). Select the correct colour system manually (see page 10).
	The power shuts off automatically.	Press the Standby button to turn the power on again (see page 6)
	Inoperable remote control.	Replace the batteries (see page 2). Insert the batteries correctly (see page 2). Use the remote control within about 7 metres of the TV.
■ PICTURE	Poor colour.	Adjust COLOUR and BRIGHT (see page 11). Select the correct colour system manually (see page 10).
	Lines or streaks in picture (interference).	Move the components apart until the interference is eliminated. Reposition the aerial.
	Spots (crosstalk).	Reposition the aerial. Replace with an aerial with better directionality.
	Double pictures (ghosts).	Reposition the aerial. Replace with an aerial with better directionality.
	Snowy pictures (noise).	Check aerial connections. Redirect the aerial. Replace or repair the aerial.
	The screen turns blue.	The BLUE BACK function is on (see page 12).
■ SOUND	No sound from the TV's speakers.	Disconnect the headphones. Set TV SPEAKER to ON (see page 22).
	No stereo sound.	Change STEREO/I•II to ⊙⊙ (stereo sound) mode (see page 10).
	No "SUB-I" or "SUB-II" sound in a multisound broadcast.	Change STEREO/I•II to the correct mode (see page 10).
	Surround function does not function properly.	Dolby Pro Logic Surround and DOLBY PRO LOGIC 3D-PHONIC work properly only with Dolby Surround encoded programmes. Functions other than HYPER SOUND and the Headphone surround functions work properly only with stereo programmes. HYPER SOUND works properly only with monaural programmes.
■ TELETEXT	No teletext reception.	Tune to a teletext broadcast channel (see page 14). We recommend that you not videotape teletext, as it may not be recorded correctly.
	The current time is not displayed.	Tune to a teletext broadcast channel (see page 12).

The following are normal and are NOT malfunctions:

- When you touch the CRT surface, you might feel a slight charge of static electricity. This is because the CRT contains static electricity; it does not affect the human body.
- The TV may emit a crackling sound due to a sudden change in temperature. There is no problem unless the picture or sound is abnormal.
- When a bright a still image (of a white dress, for example) appears on the screen, the image may be coloured. This problem occurs in all CRTs, and as the bright image disappears, such colouration also disappears.
- This TV is equipped with a microcomputer that may operate abnormally due to interference from external components. If this happens, turn off the main power and disconnect the power cord from the AC socket. Then reconnect the power cord to AC socket and turn on the main power again.

Channel table

- The following table shows the relationship between the displayed CH/CC channel number and the actual channel number.

CH	Channel
CH 2	E2
CH 3	E3, ITALY A
CH 4	E4, ITALY B
CH 5	E5, ITALY D
CH 6	E6, ITALY E
CH 7	E7, ITALY F
CH 8	E8
CH 9	E9, ITALY G
CH 10	E10, ITALY H
CH 11	E11, ITALY H+1
CH 12	E12, ITALY H+2
CH 21	E21
CH 22	E22
CH 23	E23
CH 24	E24
CH 25	E25
CH 26	E26
CH 27	E27
CH 28	E28
CH 29	E29
CH 30	E30
CH 31	E31
CH 32	E32
CH 33	E33
CH 34	E34
CH 35	E35
CH 36	E36
CH 37	E37
CH 38	E38
CH 39	E39
CH 40	E40
CH 41	E41
CH 42	E42
CH 43	E43
CH 44	E44
CH 45	E45
CH 46	E46
CH 47	E47
CH 48	E48
CH 49	E49
CH 50	E50

CH	Channel
CH 51	E51
CH 52	E52
CH 53	E53
CH 54	E54
CH 55	E55
CH 56	E56
CH 57	E57
CH 58	E58
CH 59	E59
CH 60	E60
CH 61	E61
CH 62	E62
CH 63	E63
CH 64	E64
CH 65	E65
CH 66	E66
CH 67	E67
CH 68	E68
CH 69	E69

CC	Channel
CC 1	S1
CC 2	S2
CC 3	S3
CC 4	S4
CC 5	S5
CC 6	S6
CC 7	S7
CC 8	S8
CC 9	S9
CC 10	S10
CC 11	S11
CC 12	S12
CC 13	S13
CC 14	S14
CC 15	S15
CC 16	S16
CC 17	S17
CC 18	S18
CC 19	S19
CC 20	S20
CC 21	S21
CC 22	S22
CC 23	S23
CC 24	S24
CC 25	S25
CC 26	S26
CC 27	S27
CC 28	S28
CC 29	S29
CC 30	S30
CC 31	S31
CC 32	S32
CC 33	S33
CC 34	S34
CC 35	S35
CC 36	S36
CC 37	S37
CC 38	S38
CC 39	S39
CC 40	S40

CC	Channel
CC 41	S41
CC 75	X
CC 76	Y
CC 77	Z, ITALY C
CC 78	Z+1
CC 79	Z+2

SPECIFICATIONS

Item \ Model	AV-21SX2EK	AV-25SX2EK	AV-29SX2EK
TV RF systems	CCIR I		
Colour systems	PAL (NTSC 3.58 / 4.43 MHz only in EXT modes)		
Channels and frequencies	E21-E69		
Sound-multiplex systems	NICAM system		
Teletext systems	Fastext (United Kingdom system) / WST (standard system)		
Power requirements	AC 220 – 240 V, 50 Hz		
Power consumption	Maximum 139 W, Average 82 W, Standby 3.3 W	Maximum 150 W, Average 86 W, Standby 2.8 W	Maximum 165 W, Average 105 W, Standby 3.0 W
Picture tube size	Visible area 51 cm (measured diagonally)	Visible area 59 cm (measured diagonally)	Visible area 68 cm (measured diagonally)
Audio output	Rated Power output 10 W + 10 W		
Speakers	10 cm round × 2, 2 cm round × 2		
External input / output	EXT-1, EXT-2	21-pin Euroconnector (SCART)	
	EXT-3 (not available on AV-21SX2EK)	VIDEO IN (RCA) AUDIO L / R IN (RCA)	
	AUDIO OUT	(Variable out (0-1 Vrms), low impedance) CENTRE output (RCA) FRONT L/R output (RCA) SURROUND REAR L/R output (RCA)	
	Headphone jack (stereo mini jack, dia. 3.5 mm)		
Dimensions (W × H × D)	605 mm × 476 mm × 475 mm	663 mm × 517 mm × 472 mm	733 mm × 583 mm × 487 mm
Weight	23.7 kg	29.4 kg	39.5 kg
Accessories	Remote control unit RM-C792 × 1 AAA (R03) dry cell battery × 2		

Design and specifications subject to change without notice.

Pictures displayed on the screen using this TV's image-processing functions should not be shown for any commercial or demonstration purpose in public places (tearooms and halls in hotels, etc.) without the consent of the owners of copyright of the original picture sources, as this constitutes an infringement of copyright.

JVC
VICTOR COMPANY OF JAPAN, LIMITED

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CQ40327-001-E
0397-T-CR-JMUK

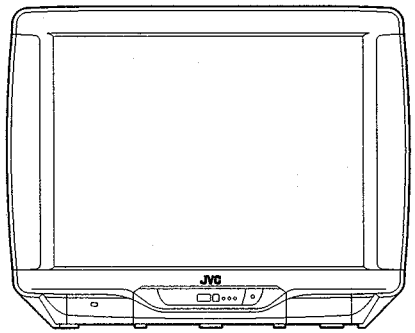
No.51207

AV-21SX2EK/AV-25SX2EK/AV-29SX2EK

JVC

COLOUR TELEVISION

AV-21SX2EK
AV-25SX2EK
AV-29SX2EK



CONTENTS

SAFETY PRECAUTIONS 2
Locations of remote control buttons 4
Locations of TV buttons and parts 5
PREPARATION AND BASIC OPERATION 6
SOUND AND PICTURE 12
OTHER FEATURES 14
TELETEXT 16
SURROUND SOUND 18
OTHER PREPARATION 20
CONNECTING AMPLIFIERS AND SPEAKERS 24
TROUBLESHOOTING 26
SPECIFICATIONS .... Back cover

INSTRUCTIONS

AV-29SX2EK

AV-29SX2EK

Thank you for purchasing this JVC colour television.

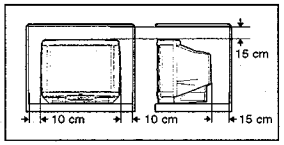
To ensure your complete understanding, please read this manual thoroughly before operation.

SAFETY PRECAUTIONS

WARNING: **TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**

CAUTION: TO ENSURE PERSONAL SAFETY, OBSERVE THE FOLLOWING RULES REGARDING THE USE OF THIS UNIT.

- Operate only from the power source specified (AC 220 – 240V, 50 Hz) on the unit.
- Avoid damaging the AC plug and power cord.
- Avoid improper installation and never position the unit where good ventilation is unattainable.
  When installing this television, distance recommendations must be maintained between the floor and wall, as well as installment in a tightly enclosed area or piece of furniture. Please adhere to the minimum distance guidelines show for safe operation.



- Do not allow objects or liquid into the cabinet openings.
- In the event of a fault, unplug the unit and call a service technician. Do not attempt to repair it yourself or remove the rear cover.

* When you do not use this TV set for a long period of time, be sure to disconnect the power plug from the AC outlet.

WARNING: **DO NOT cut off the mains plug from this equipment.** If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or adaptor or consult your dealer.

If nonetheless the mains plug is cut off, remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

If a new mains plug has to be fitted, then follow the instruction given below:

IMPORTANT.

DO NOT make any connection to the larger terminal which is marked with the letter E or by the safety earth symbol ⏚ or coloured green or green-and-yellow.

The wires in the mains lead on this product are coloured in accordance with the following code:

Blue: Neutral
Brown: Live

As these colours may not correspond with the coloured marking identifying the terminals in your plug proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

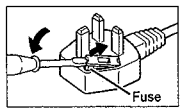
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

When replacing the fuse only a correctly rated approved type should be used and be sure to re-fit the fuse cover.

IF IN DOUBT — CONSULT A COMPETENT ELECTRICIAN.

How To Replace The Fuse

Open the fuse compartment with the blade screwdriver, and replace the fuse.



Some Do's And Don'ts On The Safe Use Of Equipment

This equipment has been designed and manufactured to meet international safety standards but, like any electrical apparatus, care must be taken if you are to obtain the best results and safety is to be assured.

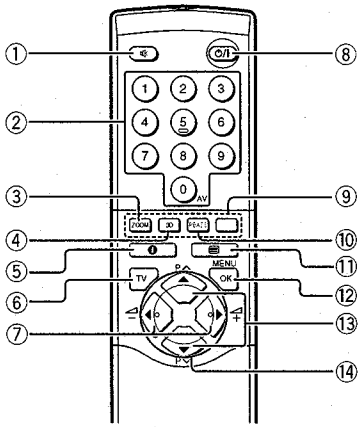
DO read the operating instructions before you attempt to use the equipment.
DO ensure that all electrical connections (including the mains plug, extension leads and interconnections between pieces of equipment) are properly made and in accordance with the manufacturer's instructions.
DO consult your dealer if you are ever in doubt about the installation or operation or safety of your equipment.
DO be careful with glass panels or doors on equipment.

DON'T continue to operate the equipment if you are in any doubt about it working normally, or if it is damaged in any way — switch off — withdraw the mains plug and consult your dealer.
DON'T remove any fixed cover as this may expose dangerous voltages.
DON'T leave equipment switched on when it is unattended unless it is specifically stated that it is designed for unattended operation or has a standby mode. Switch off using the switch on the equipment and make sure that your family know how to do this. Special arrangements may need to be made for infirm or handicapped people.
DON'T use equipment such as personal stereos or radios that may distract you when driving. It is illegal to watch television while driving.
DON'T listen to headphones at high volume, as such use can permanently damage your hearing.
DON'T obstruct the ventilation of the equipment, for example with curtains or soft furnishings. Overheating will cause damage and shorten the life of the equipment.
DON'T use makeshift stands and NEVER fix legs with wood screws — to ensure complete safety always fit the manufacturer's approved stand or legs with the fixings provided according to the instructions.
DON'T allow electrical equipment to be exposed to rain or moisture.

ABOVE ALL
— NEVER let anyone especially children push anything into holes, slots or any other opening in the case — this could result in a fatal electrical shock.
— NEVER guess or take chances with electrical equipment of any kind. It is better to be safe than sorry.

Locations of remote control buttons

OUTSIDE BUTTONS



1	Mute button	p.12
2	Number buttons	p.9
3	ZOOM button	p.15
4	3D button	p.18
5	Information button	p.14
6	TV button	
7	Volume –/+ buttons	p.9
8	Standby button	p.8
9	Colour buttons	
10	P. BASS button	p.12
11	TV/text button	p.16
12	OK button	
13	PR channel V/Λ buttons	p.9
14	◀/▶ / ▼/▲ buttons	
15	Teletext/VCR control buttons	p.16
16	VCR/TEXT selector switch	

- When switched to the VCR side, the 15 buttons function as the JVC VCR control buttons.

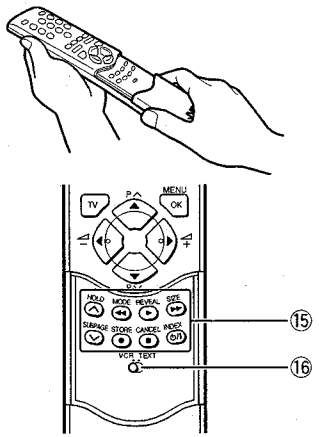
Notes:

- For details on button functions, see the JVC VCR manual.
- Depending on your VCR, the remote control may not operate perfectly, and may not even control the VCR at all.

- When switched to the TEXT side, the 15 buttons function as teletext control buttons.

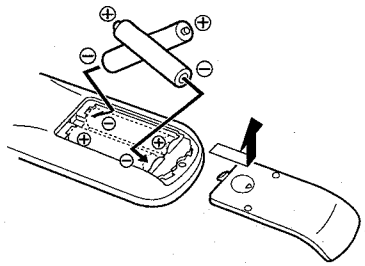
INSIDE BUTTONS

How to open the cover.



Inserting batteries into your remote control

Use two AAA/R03 dry cell batteries.
Insert two batteries, observing the ⊕ and ⊖ polarities, inserting the ⊖ end first.



CAUTION:

- Follow the cautions printed on the batteries.

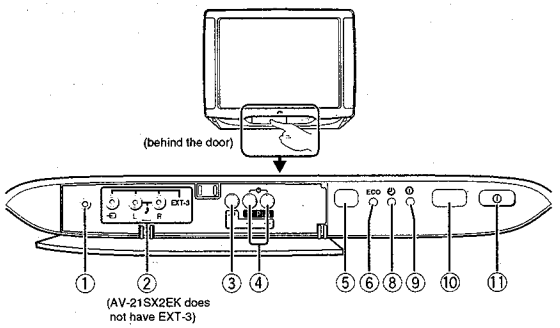
Notes:

- Battery life is approx. six months to one year, depending on frequency of use.
- If the remote control operates erratically, replace the batteries.
- We recommend that you use the supplied batteries temporarily and replace them as soon as operation becomes erratic. The supplied batteries are for operational testing of the remote control, not for regular use.

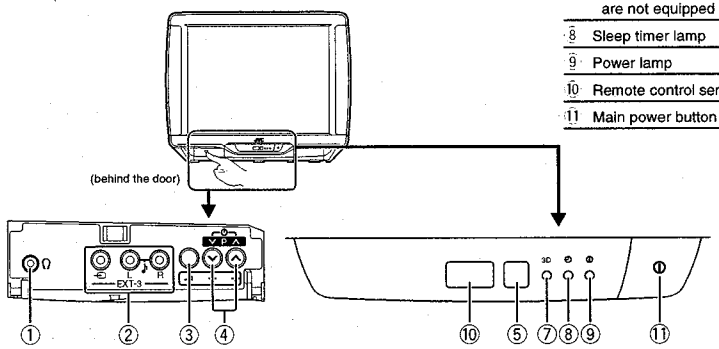
Locations of TV buttons and parts

FRONT PANEL

(AV-21SX2EK/AV-25SX2EK)



(AV-29SX2EK)

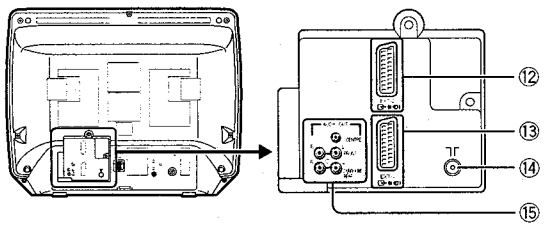


1	Headphone jack (mini jack)	p.7
2	EXT-3 terminals (AV-21SX2EK does not have this)	p.6, 20
3	Volume button (Press this button to display the volume level indicator. Press the 4 Up/down buttons to change volume while the volume level indicator is displayed.)	p.10
4	Up/down buttons (You can use this button as the V/Λ buttons of the PR channel. Pressing the 3 Volume button makes this button function as the Volume –/+ buttons.)	p.10
5	ECO sensor	
6	ECO lamp • AV-29SX2EK is not equipped with the ECO lamp.	p.13
7	3D lamp • AV-21SX2EK and AV-25SX2EK are not equipped with the 3D lamp.	p.18
8	Sleep timer lamp	p.14
9	Power lamp	p.8, 10
10	Remote control sensor	
11	Main power button	p.8, 10

CAUTION:

- Do not hold the front panel door when moving the TV set. If you do, the door may be removed or broken.

REAR PANEL

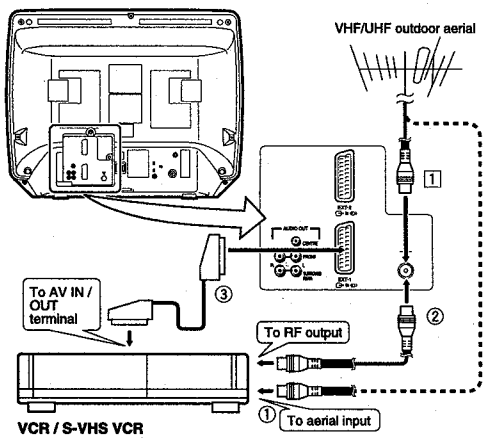


12	EXT-2 terminal	p.6, 20
13	EXT-1 terminal	p.6, 20
14	Aerial socket	p.6
15	AUDIO OUT terminals	p.24

PREPARATION AND BASIC OPERATION

1. Connecting the aerial and VCR

If not connecting a VCR, do 1 only.
If connecting a VCR, proceed 1 → 2 → 3.



Notes:
- For further details, refer to manuals provided with the devices you are connecting.
- Connecting cables are not supplied.
- You can view video from a VCR without doing 3. For details, refer to the manual provided with your VCR.

2. Connecting other external devices

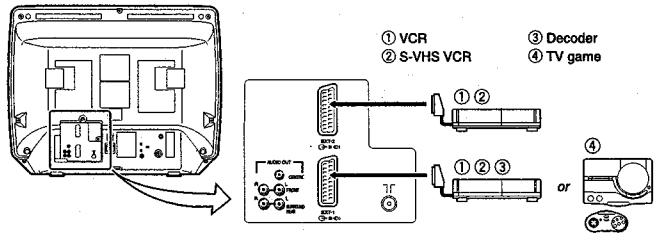
Conditions:
- This TV set has external device connectors, EXT-1 to EXT-3 (AV-21SX2EK does not have EXT-3), to which you can connect a VCR. However, there are some differences in functions among them. Consult the following table before making connections.

	EXT-1	EXT-2	EXT-3 (front)
VIDEO IN	√ *1	√ *1	√
VIDEO OUT	√ *2	√ *3	–
S-VIDEO IN	√ *1	√ *1	–
S-VIDEO OUT	–	–	–
RGB IN	√	–	–
AUDIO-L IN	√	√	√
AUDIO-R IN	√	√	√
AUDIO-L OUT	√ *2	√ *3	–
AUDIO-R OUT	√ *2	√ *3	–
Others	• Automatic detection and switching of input mode.		

*1 Select VIDEO or S-VIDEO mode from the EXT SETTING menu. For details, see page 20 "EXT SETTING."
*2 Only the TV broadcast is output.
*3 TV broadcasts or inputs from EXT-1 or 3 can be output. For details, see page 20 "DUBBING."

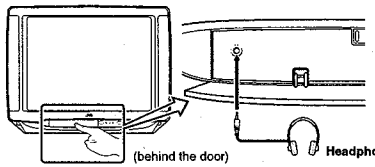
- Use headphones with a stereo mini jack (dia. 3.5 mm). When using headphones, the speakers will not output sound. Although, the signal from the AUDIO OUT terminals will not cut off when headphones are connected.
- For further details, refer to manuals provided with the devices you are connecting.
- Connecting cables are not supplied.
- For details on how to connect the AUDIO OUT terminals on your TV and external devices such as the audio amplifiers or speakers, see page 24.

Devices which can be connected to the terminals on the rear panel

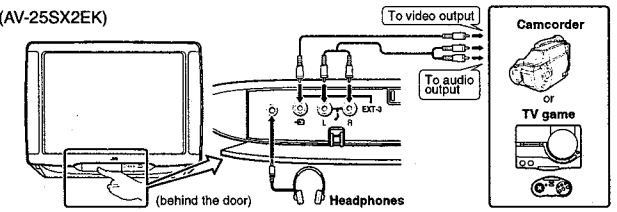


Devices which can be connected to the terminals on the front panel

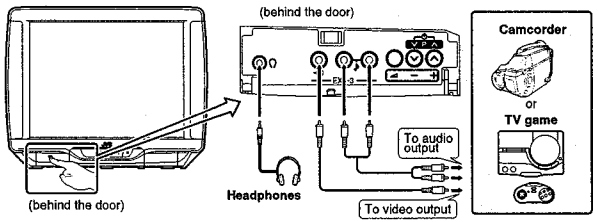
(AV-21SX2EK)



(AV-25SX2EK)

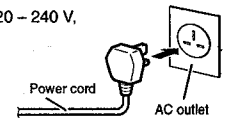


(AV-29SX2EK)



3. Connecting the power cord

Insert the power plug into an AC outlet (AC 220 – 240 V, 50 Hz).



4. Turning the power and TV on

1. Press the Main power button on the TV to turn the power on.

The Power lamp lights red (power on), then green (TV on).

(AV-21SX2EK/AV-25SX2EK) (AV-29SX2EK)

If the power lamp stays red and does not change to green:
Your TV is in the standby mode. Press the Standby button on the remote control to turn your TV on.

Note:
- You can also press the PR channel V/Λ button, a number button or the up/down button on the front panel to turn the TV on.

5. Initial Settings

- When the TV is first turned ON, it enters into the initial setting mode, and the LANGUAGE menu is displayed.

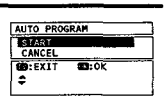
Selecting the on-screen language

You can select your language from six languages listed on the LANGUAGE menu. The displayed menus on the screen are described in the selected language.

1. Press ▼/▲ button to select ENGLISH.

2. Press OK button.

English is set for the on-screen display description, and the AUTO PROGRAM menu appears.



Note:
- The TV enters into the initial setting mode only once when the TV is first turned ON. If you turn the TV off or exit from the setting menu while performing the initial settings by mistake, you must redo the initial settings, "LANGUAGE" and "AUTO PROGRAM", following the procedures described in page 21.

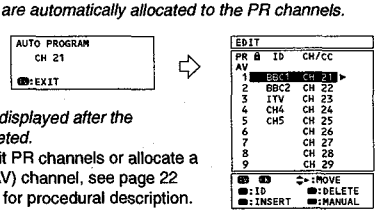
Note:
- In this manual, operation procedures are explained in English as the on-screen language is set to ENGLISH. If you select "FRANÇAIS" from the LANGUAGE selection menu, menus are all described in French of course.

Automatically allocating stations to PR channels

To view a TV programme, you must first allocate broadcast stations to PR channels. You can automatically allocate up to 99 stations to PR channels PR1 to PR 99 on this TV. Broadcast stations that can be received are automatically determined and set to PR channels.

3. Press OK button.

Broadcast stations are automatically allocated to the PR channels.



The EDIT menu is displayed after the allocation is completed.
- If you want to edit PR channels or allocate a station to PR0 (AV) channel, see page 22 "EDIT/MANUAL" for procedural description.

Note:
- If you want to quit automatic allocation in the middle, press the TV button.

- When carrying out automatic programming, the following broadcast channels and Station IDs are automatically set to PR channels PR 1 to 6 by the AUTO PROGRAM function.

PR channel	Broadcast channel	Station ID
PR 1	BBC1	BBC1
PR 2	BBC2	BBC2
PR 3	ITV	ITV
PR 4	CHANNEL4	CH4
PR 5	CHANNEL5	CH5
PR 6	SKY1*	No indication

● The procedure is complete.
Press the TV button to exit the menu.

Notes:
- When the previous tables broadcast channels cannot be received, nothing is set to that particular PR channels.
- To store different broadcast channels to PR 1 to 6, see "EDIT/MANUAL" on page 22.

* To receive SKY1, a satellite broadcast reception tuner is required. Before carrying out automatic setting, receive SKY1 on the satellite broadcast reception tuner.

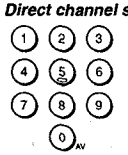
6. Viewing a television programme

1. Select a PR channel.

Selection

- Press the PR channel V/Λ button.

Direct channel selection

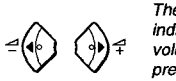


- Press the corresponding number buttons.

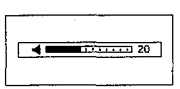
Example: To select channel 6, press "6".
To select channel 12, press "1" and "2".

Notes:
- If the picture is not clear or no colour appears, change the colour system manually (see page 12 for details).
- Enter "0" when selecting an AV channel (PR 0 channel).

2. Press the Volume –/+ button.



The Volume level indicator appears and the volume changes as you press the Volume –/+ buttons.



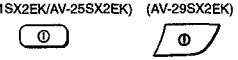
Turning the TV and power off

1. Press the Standby button to turn the TV off.

The Power lamp changes from green to red.
The TV enters standby mode.

2. Press the Main power button on the TV to turn the main power off.

(AV-21SX2EK/AV-25SX2EK) (AV-29SX2EK)



The Power lamp goes off.

Note:
- To save energy, we recommend that you turn the main power off if you do not plan to use your TV for a long time.

To select a channel without using the remote control

You can also use the buttons on the front panel of the TV.

1. Press the Up/down button to turn your TV on.

(AV-21SX2EK/AV-25SX2EK) (AV-29SX2EK)

The Power lamp changes from red to green.

Note:
- If your TV does not turn on, press the Main power button, and then press the Up/down button again.

2. Press the Up/down button to select the PR channel.

Note:
- PR channel selection is not available while the volume level indicator is displayed.

3. Adjust the volume.

(AV-21SX2EK/AV-25SX2EK)

(AV-29SX2EK)

1. Press the Volume button.
   The volume level indicator appears.
2. Press the Up/down button while the volume level indicator is displayed.

● To turn off your TV, press the Main power button.

(AV-21SX2EK/AV-25SX2EK) (AV-29SX2EK)

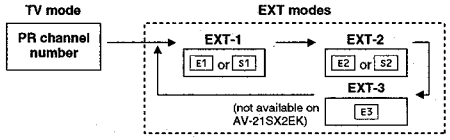
The Power lamp goes off.

Viewing images from external devices

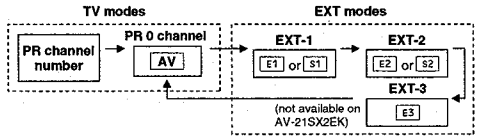
1. Repeatedly press the 0 button to select the EXT terminal.

The current selection appears, and disappears after several seconds.

When a station is not registered to the PR 0 (AV) channel, pressing the 0 button changes the selection as follows:



When a station is registered to the PR 0 (AV) channel, pressing the 0 button changes the selection as follows:



TV mode:
Shows images input from an external device (such as a VCR) or TV aerial connected to the aerial socket of your TV.

EXT modes:
Shows images input from an external device (such as a VCR) connected to the selected EXT terminal.
- To use S-Video mode to view input from an S-VHS VCR, see "To select S-VIDEO input for a terminal" on page 20. When selecting EXT-1 or EXT-2 input terminals as S-VIDEO input, E1 or E2 changes to S1 or S2 in the display.

Notes:
- If the picture is not clear or no colour appears, change the colour system manually (see page 12).
- When selecting an EXT terminal with no input signal, the EXT number and ID become fixed on screen.

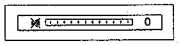
SOUND AND PICTURE

MUTE

You can mute the volume to 0 instantly. This is convenient when answering the phone or when receiving visitors.

1. Press (Mute).

The sound is muted.



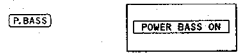
To restore the sound:
Press the Mute button again.

POWER BASS

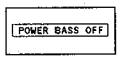
You can enjoy richness and fullness of the bass sound.

1. Press P. BASS.

The POWER BASS turns on.



To cancel the function:
Press the P. BASS button again.



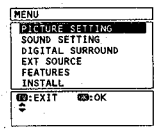
MULTI SOUND

You can select the multi sound mode for stereo broadcast programmes and bilingual programmes.

Note:
- The MULTI SOUND function has no effect without NICAM broadcast programmes.

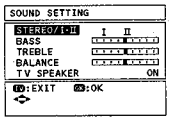
1. Press OK.

The MENU appears.



2. Press ▼/▲ to select SOUND SETTING, then press OK.

The SOUND SETTING menu appears.



3. Press ▼/▲ to select STEREO/I•II.

Notes:
- The multi sound mode display is different from the broadcast programme.
- The multi sound function does not work in EXT modes. The STEREO/I•II does not appear in SOUND SETTING menu.

4. Press ◀/▶ to select a multi sound mode.

- : Stereo sound
- I : Bilingual I (Sub I)
- II : Bilingual II (Sub II)
- : Normal sound

5. Press OK.

This completes the setting.

Note:
- When you display the current PR channel number, the current multi sound mode appears for approximately 3 seconds.

TINT

You can choose from among three TINT modes.

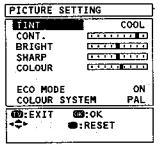
1. Press OK.

The MENU appears.

2. Press ▼/▲ to select PICTURE SETTING, then press OK.

The PICTURE SETTING menu appears.

3. Press ▼/▲ to select TINT.



4. Press ◀/▶ to select a tint mode.

COOL:
A cool white colour base with a boost in the colour and contrast levels. Creating a more vivid picture.

WARM:
Use this mode when viewing film programmes.

NORMAL:
A normal white colour base with no boost in the colour or contrast levels.

5. Press OK.

This completes the setting.

COLOUR SYSTEM

The colour system is automatically selected, but if the picture is not clear or no colour appears, select the colour system manually.

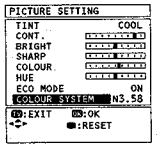
1. Press OK.

The MENU appears.

2. Press ▼/▲ to select PICTURE SETTING, then press OK.

The PICTURE SETTING menu appears.

3. Press ▼/▲ to select COLOUR SYSTEM.



4. Press ◀/▶ to select the appropriate colour system.

PAL:
PAL system.

N3.58:
NTSC 3.58 MHz system.

N4.43:
NTSC 4.43 MHz system.

AUTO:
Automatic colour system selection.

Notes:
- Auto may not function properly depending on signal quality. If the picture is abnormal in AUTO mode, select another colour system manually.
- When in TV mode (PR 1 to PR 99), you cannot select AUTO, NTSC 3.58 or NTSC 4.43.
- When in TV mode (PR 0), you cannot select NTSC 3.58 or NTSC 4.43.

5. Press OK.

This completes the setting.

PICTURE/SOUND ADJUSTMENT

You can adjust the picture and sound as you like.

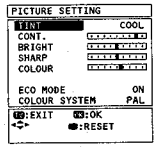
To adjust the picture

1. Press OK.

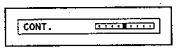
The MENU appears.

2. Press ▼/▲ to select PICTURE SETTING, then press OK.

The PICTURE SETTING menu appears.



3. Press ▼/▲ to select an item, and press ◀/▶ to adjust it.



- To return to the default settings, press blue button.

◀	Item	▶
Lower	CONT. (picture contrast)	Higher
Darker	BRIGHT (picture brightness)	Brighter
Softer	SHARP (picture sharpness)	Sharper
Lighter	COLOUR (picture colour)	Deeper
Reddish	HUE (picture hue)	Greenish

Note:
- You can adjust the HUE (picture hue) only when the colour system is NTSC 3.58 or NTSC 4.43.

4. Press OK.

This completes the setting.

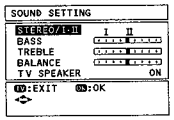
To adjust the sound

1. Press OK.

The MENU appears.

2. Press ▼/▲ to select SOUND SETTING, then press OK.

The SOUND SETTING menu appears.



Note:
- When DOLBY* PRO LOGIC is selected in DIGITAL SURROUND menu, BALANCE and TV SPEAKER do not appear.

- Manufactured under license from Dolby laboratories Licensing Corporation.
"Dolby", the double-D symbole and "Pro Logic" are trademarks of Dolby Laboratories Licensing Corporation.

3. Press ▼/▲ to select an item, and press ◀/▶ to adjust it.

◀	Item	▶
Weaker	BASS (low frequency sound)	Stronger
Weaker	TREBLE (high frequency sound)	Stronger
Left	BALANCE (audio balance)	Right

TV SPEAKER ON/OFF:
Use this function if you connect an audio amplifier and front speakers to your TV. If you set this function to OFF, sound is no longer output from the TV's speakers and the headphones connected to your TV. For details, see "To use 2 external speakers" on page 24.

4. Press OK.

This completes the setting.

ECO MODE

When you set ECO MODE to ON, the screen contrast is automatically adjusted to a setting suitable for the brightness of your room.
This reduces eye strain and the power consumption of the TV.

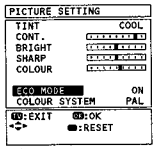
1. Press OK.

The MENU appears.

2. Press ▼/▲ to select PICTURE SETTING, then press OK.

The PICTURE SETTING menu appears.

3. Press ▼/▲ to select ECO MODE.



4. Press ◀/▶ to select ON, OFF.

5. Press OK.

This completes the setting.

- AV-21SX2EK and AV-25SX2EK are eqquipped with the ECO lamp. If you turned on ECO MODE, the ECO lamp lights.

SURROUND SOUND

DOLBY PRO LOGIC 3D-PHONIC

You can enjoy the ambiance of Dolby Surround encoded programmes.

Condition:
- Before performing the procedure, disconnect headphones from the TV.

Note:
- This function works only with Dolby Surround encoded programmes.
- AV-29SX2EK is equipped with the 3D lamp. When operating this function, the TV's 3D lamp lights up.

1. Press OK.

The MENU appears.

2. Press ▼/▲ to select DIGITAL SURROUND, then press OK.

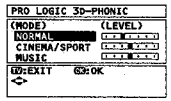
The DIGITAL SURROUND menu appears, showing the currently active function.

3. Press ▼/▲ to select PRO LOGIC 3D-PHONIC.

To cancel the function:
Select SURROUND OFF, then press the OK button.

4. Press ▶.

The PRO LOGIC 3D-PHONIC menu appears.



5. Press ▼/▲ to select the desired mode.

NORMAL:
For normal programmes

CINEMA/SPORT:
For cinema and sports programmes

MUSIC:
For music programmes

To adjust the effect level:
Press the ◀/▶ button.

6. Press OK.

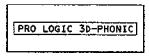
Note:
- If, while using this function, you connect headphones to your TV, the 3D HEADPHONE function (see next page) activates automatically.

To turn on/off DOLBY PRO LOGIC 3D-PHONIC with one touch

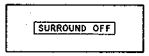
1. Press 3D.

DOLBY PRO LOGIC 3D-PHONIC turns on.

3D



To cancel the function:
Press the 3D button again.



To return the previous surround function:
Press the 3D button twice.

Note:
- If headphones are connected to the TV, 3D HEADPHONE will appear instead of PRO LOGIC 3D-PHONIC. In this case, unplug the headphones from the TV.

DIGITAL SURROUND

You can enjoy any one of the four Digital Surround function.

Condition:
- Before performing the procedure, disconnect headphones from the TV.

1. Press OK.

The MENU appears.

2. Press ▼/▲ to select DIGITAL SURROUND, then press OK.

The DIGITAL SURROUND menu appears, showing the currently active function.

3. Press ▼/▲ to select the desired function.

DANCE CLUB:
For the atmosphere of a dance club

CONCERT HALL:
For the atmosphere of a concert hall

STADIUM:
For the atmosphere of a stadium

HYPER SOUND:
To give monaural sound the spacious feeling of stereo sound

To cancel the function:
Select SURROUND OFF.

4. Press OK.

Notes:
- Only HYPER SOUND works well with monaural sound programmes.
- HYPER SOUND does not work well with stereo sound programmes.
- If, while using this function, you connect headphones to your TV, Headphone Surround (see next page) activates automatically.

HEADPHONE SURROUND

You can enjoy surround sound on your headphones. You can enjoy any one of the four Headphone surround functions.

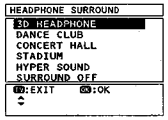
Condition:
- Before performing this procedure, connect headphones to the TV.

1. Press OK.

The MENU appears.

2. Press ▼/▲ to select HEADPHONE SURROUND, then press OK.

The HEADPHONE SURROUND menu appears, showing the currently active function.



3. Press ▼/▲ to select the desired function.

3D HEADPHONE:
For a broad, atmospheric sound

DANCE CLUB:
For the atmosphere of a dance club

CONCERT HALL:
For the atmosphere of a concert hall

STADIUM:
For the atmosphere of a stadium

HYPER SOUND:
To give monaural sound the spacious feeling of stereo sound

To cancel the function:
Select SURROUND OFF.

4. Press OK.

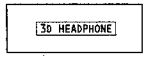
Note:
- HYPER SOUND does not work well with stereo sound programmes.

To turn the 3D HEADPHONE on/off with one touch

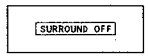
1. Press 3D.

3D HEADPHONE turns on.

3D



To cancel the function:
Press the 3D button again.



To return the previous surround function:
Press the 3D button twice.

Note:
- If headphones are not connected to the TV, PRO LOGIC 3D-PHONIC will appear instead of 3D HEADHONE. In this case, plug headphones into the TV.

DOLBY PRO LOGIC SURROUND

You can also use Dolby Pro Logic Surround sound with 4 or 5 speakers. If you wish to use this system, additional amplifiers and speakers are required. For details, see "To use 4 or 5 speakers" on page 25.

Condition:
- Before performing the procedure, disconnect headphones from the TV.

Note:
- This function works only with Dolby Surround encoded programmes.

1. Press OK.

The MENU appears.

2. Press ▼/▲ to select DIGITAL SURROUND, then press OK.

The DIGITAL SURROUND menu appears, showing the currently active function.

3. Press ▼/▲ to select DOLBY PRO LOGIC.

To cancel the function:
Select SURROUND OFF.

4. Press OK.

Note:
- If, while using this function, you connect headphones to the TV, the 3D HEADPHONE function (see above) activates automatically. However, note that you cannot use Dolby Pro Logic Surround with headphones.

EXT SETTING

You can select S-VIDEO or normal input for the EXT-1 and EXT-2 terminals, and you can give an EXT ID to each EXT input terminal.

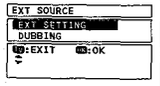
To select S-VIDEO input for a terminal

1. Press OK.

The MENU appears.

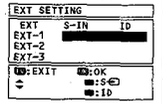
2. Press ▼/▲ to select EXT SOURCE, then press OK.

The EXT SOURCE menu appears.



3. Press ▼/▲ to select EXT SETTING, then press OK.

The EXT SETTING menu appears.

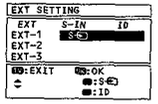


Note:
- The AV-21SX2EK does not have EXT-3 terminals, so "EXT-3" will not be displayed.

4. Press ▼/▲ to select an EXT input terminal.

5. Press yellow button.

The S-VIDEO input indication appears.
- To select normal input, press yellow button again.



- If you want to set an EXT ID here, perform the operation procedures from the step 4 of the section "To give an EXT ID to an EXT input terminal" in the next column.

6. Press OK.

The menu disappears.

To give an EXT ID to an EXT input terminal

1. Press OK.

The MENU appears.

2. Press ▼/▲ to select EXT SOURCE, then press OK.

The EXT SOURCE menu appears.

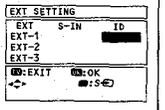
3. Press ▼/▲ to select EXT SETTING, then press OK.

The EXT SETTING menu appears.

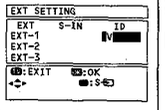
Note:
- The AV-21SX2EK does not have EXT-3 terminals, so "EXT-3" will not be displayed.

4. Press ▼/▲ to select an EXT input terminal.

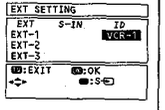
5. Press blue button.



6. Repeatedly press ▼/▲ to select a character.



7. Press ▶ to move the cursor forward.
- Pressing ◀ button moves the cursor backward.
- To cancel the operation, press the (Information) button.



8. Press OK.

Note:
- To erase EXT ID, reset the EXT ID to a blank space.

● This completes the procedure. Press the TV button to exit the menu.

DUBBING

Select output to a VCR or other device connected to the EXT-2 terminal. Note that you cannot output from the EXT-2 terminal when the TV is turned off.

Note:
- RGB signals from TV games and TELETEXT screens cannot be output from EXT-2 terminal.

1. Press OK.

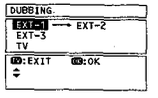
The MENU appears.

2. Press ▼/▲ to select EXT SOURCE, then press OK.

The EXT SOURCE menu appears.

3. Press ▼/▲ to select DUBBING, then press OK.

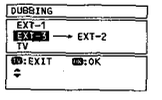
The DUBBING menu appears.

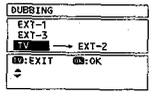


Note:
- The AV-21SX2EK does not have EXT-3 terminals, so "EXT-3" will not be displayed.

4. Press ▼/▲ to select the input which you want to output from EXT-2.

TV:
The sound and picture of the currently selected PR channel is output from EXT-2, so you can record the output on a VCR connected to the EXT-2 terminal while watching a video input from the EXT-1 or EXT-3 terminal.





5. Press OK.

The menu disappears.

LANGUAGE

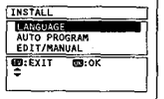
You can select one of six languages for the on-screen display.

1. Press OK.

The MENU appears.

2. Press ▼/▲ to select INSTALL, then press OK.

The INSTALL menu appears.



3. Press ▼/▲ to select LANGUAGE, then press OK.

The LANGUAGE menu appears.

4. Press ▼/▲ to select a language.

5. Press OK.

This completes the setting.

AUTO PROGRAM

You can automatically allocate up to 99 stations to PR channels PR 1 to PR99 on this TV.
When the TV receives a signal describing the station's name, it allocates those stations, station IDs, and registers then as they were preset at the JVC factory.

1. Press OK.

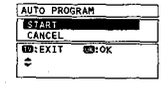
The MENU appears.

2. Press ▼/▲ to select INSTALL, then press OK.

The INSTALL menu appears.

3. Press ▼/▲ to select AUTO PROGRAM, then press OK.

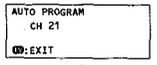
The AUTO PROGRAM menu appears.

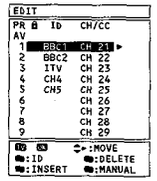


Note:
- If you make a mistake when selecting your country, or do not want to use the Automatic allocation function, select CANCEL, and then press OK button to return to the INSTALL menu.

4. Press OK.

The PR channel is automatically set and the EDIT menu is displayed.
- If you want to edit PR channels or allocate a station to PR0 (AV) channel, see page 22 "EDIT/ MANUAL" for procedural description.





Note:
- If a station you want to view is not allocated to a PR channel, perform Manual allocation (see page 23).

● The procedure is complete. Press the TV button to exit the menu.

EDIT/MANUAL

You can change PR channel settings by doing any of the following:
- You can delete an unwanted station from a PR channel,
- You can change the PR channel number of a station,
- You can add station IDs to PR channels,
- You can add a new station to a PR channel, or
- You can manually allocate the desired station to a PR channel.

To edit PR channels

1. Press OK.

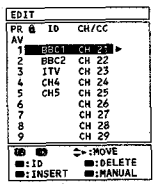
The MENU appears.

2. Press ▼/▲ to select INSTALL, then press OK.

The INSTALL menu appears.

3. Press ▼/▲ to select EDIT/MANUAL, then press OK.

The EDIT menu appears.

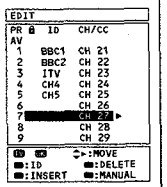


4. Use any of the procedures described in the following pages to change the PR channel settings.

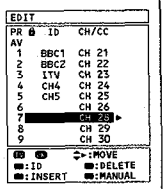
● This completes the procedure. Press the TV button to exit the menu.

To delete a station from a PR channel

1. Press ▼/▲ to select the station you want to delete.



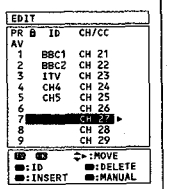
2. Press yellow button.



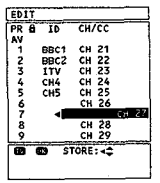
Note:
- Stations allocated to PR channels following the deleted PR channel number are shifted back by one to the preceding PR channel number.

To change the PR channel number of a station

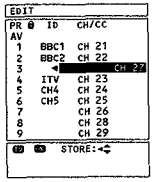
1. Press ▼/▲ to select the station.



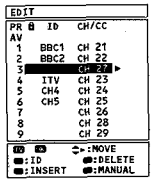
2. Press ▶.



3. Press ▼/▲ to move the selected station to the desired PR channel number.
- To cancel the operation, press the 0 (Information) button.

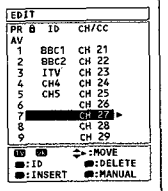


4. Press ◀.

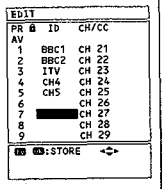


To add a station ID to a station

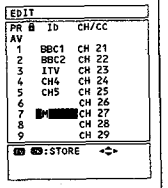
1. Press ▼/▲ to select the station.



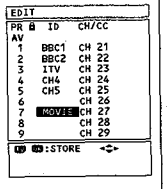
2. Press red button.



3. Press ▼/▲ repeatedly to select a character.
- To cancel the operation, press the 0 (Information) button.



4. Press ▶ to move the cursor forward.
- Pressing ◀ button moves the cursor backward.
- To complete station ID, follow steps 3 and 4 repeatedly.

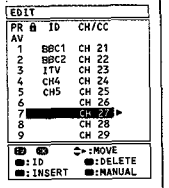


5. Press OK.

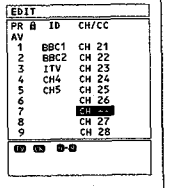
Returns to the EDIT menu.

To add a new station to a PR channel

1. Press ▼/▲ to select the row containing the PR channel number to which you want to add a station.

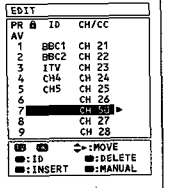


2. Press green button.
- To cancel the operation, press the 0 (Information) button.



Note:
- For details on the relationship between the displayed CH number and the actual channel number, see the Channel table on page 27.

3. Press the number buttons to enter the channel number.
- To enter a one-digit channel number, enter the corresponding number and press OK button.

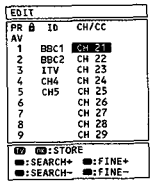


Note:
- When you add a station, the station preset to PR99 is deleted.

To manually allocate a station to PR channel (Manual allocation)

1. Press blue button.

Your TV enters the Manual allocation mode.



2. Press ▼/▲ to select a PR channel number.

Note:
- PR channel number "AV" appears on the screen as PR 0 channel. We recommend that you allocate this PR channel to a VCR connected to the aerial socket.

3. Press green or red button to search for a station.

Scanning stops when the TV receives a broadcast.
Press green or red button to search for another station, and keep searching until you see the station you want.

If reception is poor:
Press the blue or yellow button to fine-tune the station.

Note:
- For details on the relationship between the displayed CH number and the actual channel number, see the Channel table on page 27.

4. Press OK.

The station is allocated to a PR channel.

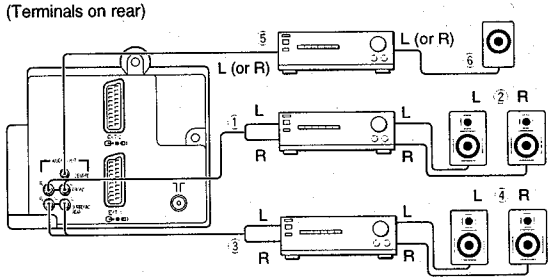
CONNECTING AMPLIFIERS AND SPEAKERS

Condition:
- When connecting audio amplifiers and speakers to your TV:
  - Turn the TV and audio amplifiers off before connecting them.
  - Set the audio amplifiers' volume to minimum.
  - Refer to manuals provided with the amplifier and speakers for further details.

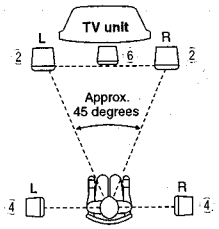
Notes:
- The AUDIO OUT terminals on your TV are for connecting to an audio system. The output level is controlled by the Volume controls of your TV. The signal from the AUDIO OUT terminals will not cut off when headphones are connected.
- If you connect a Dolby Pro Logic Surround decoder to your TV, use the FRONT L and R jacks. Your TV has Dolby Pro Logic Surround functions, so if you connect an external decoder, turn off all surround function on your TV.

1, 3: Stereo amplifier
2: Front speakers (magnetic-shielded type, L, R)
4: Surround speakers (L, R)
5: Stereo amplifier (or monaural amplifier)
6: Centre speaker (magnetic-shielded type)

(Terminals on rear)



Positioning speakers



Notes:
- For a good effect, place speakers 4 1.0 m above the seated listener's head.
- For a good effect, place speaker 6 as close as possible to the TV along the same line as or behind, speakers 2.
- Use magnetic-shielded speakers for speakers 2 and 6 to avoid TV interference.

To use 2 external speakers

You can cut off the sound output from the TV's speakers and enjoy sound from external front speakers.

1. Connect stereo amplifier 1 and front speakers 2 to your TV.

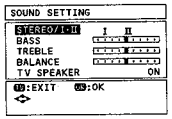
2. Turn your TV on, and press the Volume –/+ button to set the volume to the lowest setting.

3. Press OK.

The MENU appears.

4. Press ▼/▲ to select SOUND SETTING, then press OK.

The SOUND SETTING menu appears.



Note:
- When DOLBY PRO LOGIC is selected in DIGITAL SURROUND menu, "TV SPEAKER" does not appear. In this case, press the OK button to exit the current menu. Then, press the 3D button twice to select SURROUND OFF and repeat from Step 3.

5. Press ▼/▲ to select TV SPEAKER.

6. Press ◀/▶ to select OFF.

The TV's speakers become silent and the menu disappears after several seconds.

To output sound from the TV speakers:
Set TV SPEAKER to ON.

Note:
- If TV SPEAKER is set to OFF, sound will no longer be output from the headphones connected to your TV.

7. Press OK.

The menu disappears.

8. Turn your audio amplifier on, and return the volume of your audio amplifier to the normal setting.

Note:
- Take care not to set the volume of your audio amplifier too high as this may damage your speakers.

9. Press the Volume –/+ button to adjust the volume.

● This completes the procedure.

To use 4 or 5 speakers

You can enjoy Dolby Pro Logic Surround sound with 4 or 5 speakers.

1. Connect audio amplifiers and speakers to the TV.

Do one of the following:

A: Connect stereo amplifier 3 and surround speakers 4. This leaves out the centre speaker.

B: Connect stereo amplifiers 1, 3, front speakers 2, and surround speakers 4. This uses the TV's speakers as the centre speakers.

C: Connect stereo amplifiers 1, 3, stereo amplifier (or monaural amplifier) 5, front speakers 2, surround speakers 4, and centre speaker 6. If you use this method, do not output sound from the TV's speakers.

2. Turn your TV on, and press the Volume –/+ button to set the volume to the normal setting.

3. Press OK.

The MENU appears.

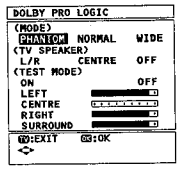
4. Press ▼/▲ to select DIGITAL SURROUND, then press OK.

The DIGITAL SURROUND menu appears, showing the currently selected setting.

Note:
- If headphones are connected to the TV, DIGITAL SURROUND does not appear in the MENU. Disconnect the headphones.

5. Press ▼/▲ to select DOLBY PRO LOGIC, then press ▶.

The DOLBY PRO LOGIC menu appears.



6. Press ▼/▲ to select an item, and press ◀/▶ to change its setting.

Method	Item: MODE	Item: TV SPEAKER
A	PHANTOM	L/R
B	NORMAL	CENTRE
C	NORMAL	OFF
	WIDE	

Note:
- Set MODE to WIDE when using a full-range speaker as the centre speaker. Frequencies of 100 Hz or lower are output from the centre speaker to give Dolby Surround an even greater impact.

7. Turn your audio amplifier on, and return the volume of your audio amplifier to the normal setting.

Note:
- Take care not to set the volume of your audio amplifier too high as this may damage your speakers.

8. Press ▼/▲ to select TEST MODE.

9. Press ◀/▶ to set TEST MODE to ON.

Test signals alternate among the speakers.

Note:
- If the test signal level is small to listen to, adjust it with the volume of your audio amplifier. However, take care not to set the volume too high as this may damage your speakers.

10. Press ◀/▶ to adjust the level of each of the speakers so that their volumes are the same at the listening position (the place where the person is sitting in the diagram, see page 24).

LEFT, RIGHT:
Front speaker L, R

CENTRE:
Centre speaker

SURROUND:
Surround speakers

Notes:
- When MODE is set to PHANTOM, the volume of CENTRE: (Centre speaker) cannot be adjusted.
- If the volume of both speakers is not the same even after adjusting the volume, adjust the volume of your audio amplifier.

11. Press OK.

The menu disappears.

● This completes the procedure.

TROUBLESHOOTING

- If the plug is disconnected from the AC socket, or the TV aerial has problems, you may think there is a problem with the TV itself. Be sure to check the following before calling for service.

IMPORTANT

- Review all instructions in this manual.

	Problem	Action
■ GENERAL	No power supply.	Insert the plug in an AC socket. Press the Main power button (see page 8).
	No picture or sound.	Check aerial connections (see page 6). Press the number 0 button to select the correct mode (see page 11). Select the correct colour system manually (see page 12).
	The power shuts off automatically.	Press the Standby button to turn the power on again (see page 8).
	Inoperable remote control.	Replace the batteries (see page 4). Insert the batteries correctly (see page 4). Use the remote control within about 7 metres of the TV.
■ PICTURE	Poor colour.	Adjust COLOUR and BRIGHT (see page 13). Select the correct colour system manually (see page 12).
	Lines or streaks in picture (interference).	Move the components apart until the interference is eliminated. Reposition the aerial.
	Spots (crosstalk).	Reposition the aerial. Replace with an aerial with better directionality.
	Double pictures (ghosts).	Reposition the aerial. Replace with an aerial with better directionality.
	Snowy pictures (noise).	Check aerial connections. Redirect the aerial. Replace or repair the aerial.
	The screen turns blue.	The BLUE BACK function is on (see page 14).
■ SOUND	No sound from the TV's speakers.	Disconnect the headphones. Set TV SPEAKER to ON (see page 24).
	No stereo sound.	Change STEREO/I•II to ⊙⊙ (stereo sound) mode (see page 12).
	No "SUB-I" or "SUB-II" sound in a multisound broadcast.	Change STEREO/I•II to the correct mode (see page 12).
	Surround function does not function properly.	Dolby Pro Logic Surround and DOLBY PRO LOGIC 3D-PHONIC work properly only with Dolby Surround encoded programmes. Functions other than HYPER SOUND and the Headphone surround functions work properly only with stereo programmes. HYPER SOUND works properly only with monaural programmes.
■ TELETEXT	No teletext reception.	Tune to a teletext broadcast channel (see page 16). We recommend that you not videotape teletext, as it may not be recorded correctly.
	The current time is not displayed.	Tune to a teletext broadcast channel (see page 14).

The following are normal and are NOT malfunctions:

- When you touch the CRT surface, you might feel a slight charge of static electricity. This is because the CRT contains static electricity; it does not affect the human body.
- The TV may emit a crackling sound due to a sudden change in temperature. There is no problem unless the picture or sound is abnormal.
- When a bright a still image (of a white dress, for example) appears on the screen, the image may be coloured. This problem occurs in all CRTs, and as the bright image disappears, such colouration also disappears.
- This TV is equipped with a microcomputer that may operate abnormally due to interference from external components. If this happens, turn off the main power and disconnect the power cord from the AC socket. Then reconnect the power cord to AC socket and turn on the main power again.

Channel table

- The following table shows the relationship between the displayed CH channel number and the actual channel number.

CH --	Channel	CH --	Channel	CH --	Channel	CH --	Channel
CH 21	E21	CH 34	E34	CH 47	E47	CH 60	E60
CH 22	E22	CH 35	E35	CH 48	E48	CH 61	E61
CH 23	E23	CH 36	E36	CH 49	E49	CH 62	E62
CH 24	E24	CH 37	E37	CH 50	E50	CH 63	E63
CH 25	E25	CH 38	E38	CH 51	E51	CH 64	E64
CH 26	E26	CH 39	E39	CH 52	E52	CH 65	E65
CH 27	E27	CH 40	E40	CH 53	E53	CH 66	E66
CH 28	E28	CH 41	E41	CH 54	E54	CH 67	E67
CH 29	E29	CH 42	E42	CH 55	E55	CH 68	E68
CH 30	E30	CH 43	E43	CH 56	E56	CH 69	E69
CH 31	E31	CH 44	E44	CH 57	E57		
CH 32	E32	CH 45	E45	CH 58	E58		
CH 33	E33	CH 46	E46	CH 59	E59		